

Chapter 7: Service Improvement Strategies

This chapter describes proposed service improvements for fixed-route bus service in the Bangor region. These proposed changes are designed to improve service quality and convenience for existing bus riders. And they are designed to attract new riders to the bus system by making routes and services more relevant and useful for residents who are not now regular transit users. Improvement strategies are grouped under four subheadings:

Adjustments to Existing Routes and Services

- 7.1 Revise Center Street
- 7.2 Restructure Mt. Hope and add a new Mall route
- 7.3 Add evening service to existing routes
- 7.4 Add a second Brewer bus for outer Wilson Street
- 7.5 Increase the frequency of the Old Town route
- 7.6 Operate a modified Hampden route all day

University of Maine Transit Services

- 7.7 Campus / park & ride shuttle
- 7.8 Research Park / I-95 bus route
- 7.9 Park Street / Talmar Woods shuttle

Eastern Maine Medical Center Shuttles

- 7.10 EMMC downtown shuttle
- 7.11 Sylvan Road park and ride shuttle
- 7.12 Wing lot park and ride shuttle

Intermodal Transportation Links

- 7.13 Bangor downtown shuttle
- 7.14 Airport / hotel / outer Hammond Street route

ADJUSTMENTS TO EXISTING ROUTES AND SERVICES

7.1 Revise Center Street

There is not enough time in the Center Street schedule to allow this bus to offer consistent on-time service. Section 7.1 presents seven different possible strategies for correcting this situation. While the first two involve no added costs, they result in a significant reduction in service quality and convenience. Each of the remaining five alternatives calls for adding a second bus to the route.

Center Street options are summarized in Figure 7.1.

Figure 7.1 Center Street Route and Schedule Options

	<i>Description</i>	<i>Buses</i>	<i>Strengths</i>	<i>Weaknesses</i>
1	Current route; hourly service	One	No extra cost	Low frequency; poor connections; decreased ridership
2	Alternate short and long routes	One	No extra cost; maintains 30-minute service to Broadway Shopping Center	Confusing schedule; inconsistent service for Bangor Gardens and Husson Avenue
3	Extend route to Bangor High School	Two	Improved 2-way service for Broadway Shopping Center, Bangor Gardens, and Husson Ave; high visibility at Bangor High School; significant layover time	Better service for high school students, but adds no other significant new markets
4	Extend route to Trailer Park	Two	New service to outer Broadway locations	One-way service through Bangor Gardens; confusing route for Husson Ave; limited layover time
5	Extend route to Airport Mall	Two	New link between Center Street and Capehart routes; new access for Center Street riders to Airport Mall	No service to outer Broadway locations; no service through Bangor Gardens
6	Short Broadway Shopping Center route with separate Mall Connector route	Two	Direct route between downtown Bangor and Broadway Shopping Center; new cross-town Mall link; direct access from Husson Ave to 3 malls	No direct link between Husson Ave and downtown Bangor; Husson Ave frequency reduced to every 60 minutes; no service to outer Broadway; no service for Bangor Gardens
7	Broadway Shopping Center route with limited trips (or service on request) for Bangor Gardens; separate Mall Connector route	Two	Direct route between downtown Bangor and Broadway Shopping Center; new cross-town Mall link; direct access from Husson Ave to 3 malls; continued bus service for Bangor Gardens	No direct link between Husson Ave and downtown Bangor; Husson Ave frequency reduced to every 60 minutes; no service to outer Broadway; limited trips or stop requests required for Bangor Gardens; time constraints for trips that serve Bangor Gardens

7.1.1 Provide hourly service with one bus

On-time performance on the Center Street route could be improved by lengthening the roundtrip time to 60 minutes while continuing to use only one bus. This would result in less frequent Center Street service. Instead of every 30 minutes, locations on the Center Street route would be served once per hour. This is the level of service currently offered on the Center Street route on Saturdays.

If 60 minutes is allowed for a round trip, it should be possible to extend the route beyond its current endpoint. Possible route configurations for a 60-minute roundtrip are described in Sections 7.1.3 through 7.1.5.

This change is likely to result in a significant decrease in bus usage by people who live along the Center Street route. Residents have already complained about infrequent hourly service on Saturdays. Such a change will also reduce ridership on other Bangor bus routes, since a significant number of passengers on these routes transfer to and from the Center Street bus.

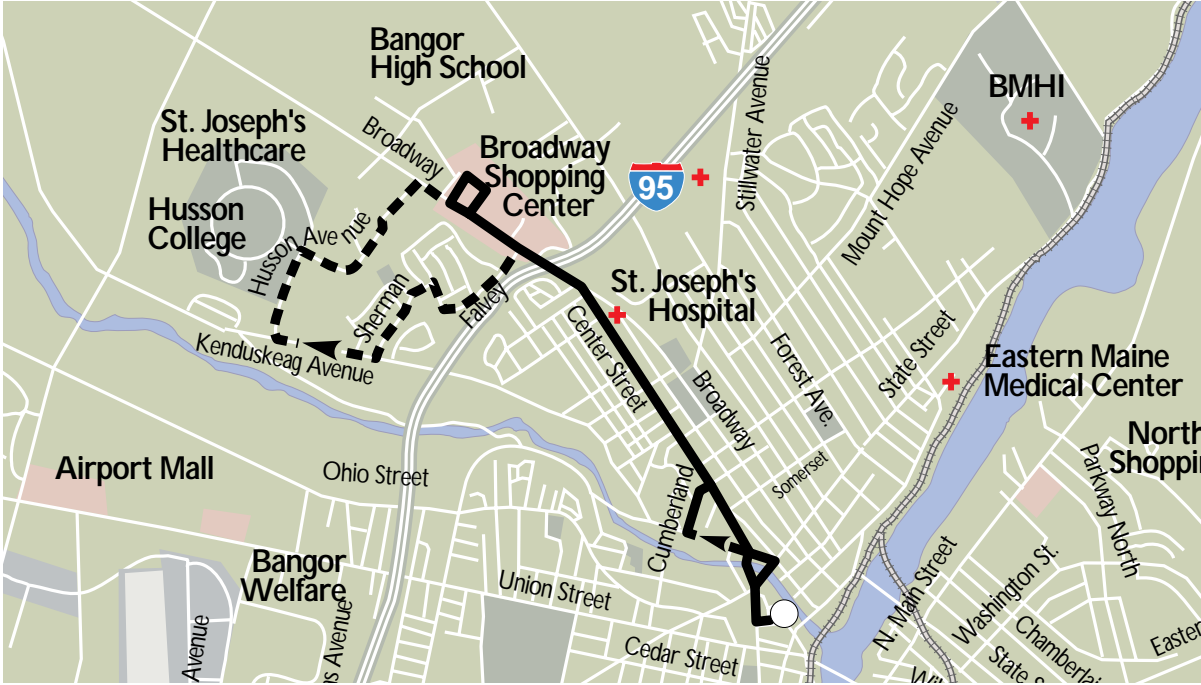
7.1.2 Alternate between short and long trips

On-time issues could be mitigated somewhat by having the Center Street bus alternate between long and short versions of the route. While buses might continue to run late on the longer route, they would be able to make up this time on the subsequent short trip. This would keep on-time problems from compounding through the course of the day.

Buses departing downtown 15 minutes past the hour could operate the full route, while buses departing at 45 minutes past the hour could operate on Broadway directly to and from the Broadway Shopping Center, without serving Bangor Gardens and Husson Avenue. A map and timetable for this route design is presented in Figure 7.2.

While avoiding extra costs, this approach will result in decreased convenience and increased confusion for Center Street bus riders. The Lewiston-Auburn Transit Committee has alternated short and long trips on the Lisbon Street route in Lewiston for several years. The Transit Committee plans to discontinue this practice and return to consistent 30-minute service because of customer dissatisfaction with the current short/long route configuration.

Figure 7.2 Center Street with Short and Long Trips



ONE BUS - ALTERNATING SHORT AND LONG ROUTES

Bangor Depot	St. Joseph Hospital	Husson College	Broadway Shopping Center	St. Joseph Hospital	Bangor Depot
6:15 a	6:22 a	6:30 a	6:33 a	6:36 a	6:43 a
6:45 a	6:52 a	-	6:57 a	7:01 a	7:08 a
7:15 a	7:22 a	7:30 a	7:33 a	7:36 a	7:43 a
7:45 a	7:52 a	-	7:57 a	8:01 a	8:08 a
8:15 a	8:22 a	8:30 a	8:33 a	8:36 a	8:43 a
8:45 a	8:52 a	-	8:57 a	9:01 a	9:08 a
9:15 a	9:22 a	9:30 a	9:33 a	9:36 a	9:43 a
9:45 a	9:52 a	-	9:57 a	10:01 a	10:08 a
10:15 a	10:22 a	10:30 a	10:33 a	10:36 a	10:43 a
10:45 a	10:52 a	-	10:57 a	11:01 a	11:08 a
11:15 a	11:22 a	11:30 a	11:33 a	11:36 a	11:43 a
11:45 a	11:52 a	-	11:57 a	12:01 p	12:08 p
12:15 p	12:22 p	12:30 p	12:33 p	12:36 p	12:43 p
12:45 p	12:52 p	-	12:57 p	1:01 p	1:08 p
1:15 p	1:22 p	1:30 p	1:33 p	1:36 p	1:43 p
1:45 p	1:52 p	-	1:57 p	2:01 p	2:08 p
2:15 p	2:22 p	2:30 p	2:33 p	2:36 p	2:43 p
2:45 p	2:52 p	-	2:57 p	3:01 p	3:08 p
3:15 p	3:22 p	3:30 p	3:33 p	3:36 p	3:43 p
3:45 p	3:52 p	-	3:57 p	4:01 p	4:08 p
4:15 p	4:22 p	4:30 p	4:33 p	4:36 p	4:43 p
4:45 p	4:52 p	-	4:57 p	5:01 p	5:08 p
5:15 p	5:22 p	5:30 p	5:33 p	5:36 p	5:43 p
5:45 p	5:52 p	-	5:57 p	-	-

7.1.3 Add a second bus and extend the Center Street route to Bangor High School

There are a number of ways to fix the Center Street route by adding a second bus to the route and allowing 60 minutes for a round trip. One possibility would be to extend the route to Bangor High School. Outbound buses would operate from St. Joseph's Hospital to the Broadway Shopping Center, and then via the Bangor Gardens residential area to Husson College. They would continue via Husson Avenue, Broadway, and Hobart Street to Bangor High School. Buses would return from the High School to Husson College via Hobart Street, Grandview Avenue, Broadway, and Husson Avenue. They would then continue through the Bangor Gardens neighborhood to the Broadway Shopping Center, returning from there to downtown Bangor.

The timetable would include a brief layover at Bangor High School. A map and timetable for this route are presented in Figure 7.3.

This proposed route does not include a front-door stop at St. Joseph's Healthcare because of the dangers involved in turning left into this driveway from Broadway and in exiting the facility by crossing Broadway. A bus shelter could be installed on Hobart Street opposite the St. Joseph's driveway. Bus passengers would be required to walk from there to the entrance of the healthcare facility.

The major strength of this alternative is that it preserves and improves service for existing markets. It offers direct links in both directions between downtown Bangor and the Broadway shopping center, as well as between Bangor Gardens/Husson Avenue and Broadway Shopping Center. It provides direct service and greater visibility for high school students. And it includes ample time for wheelchair passengers and traffic delays.

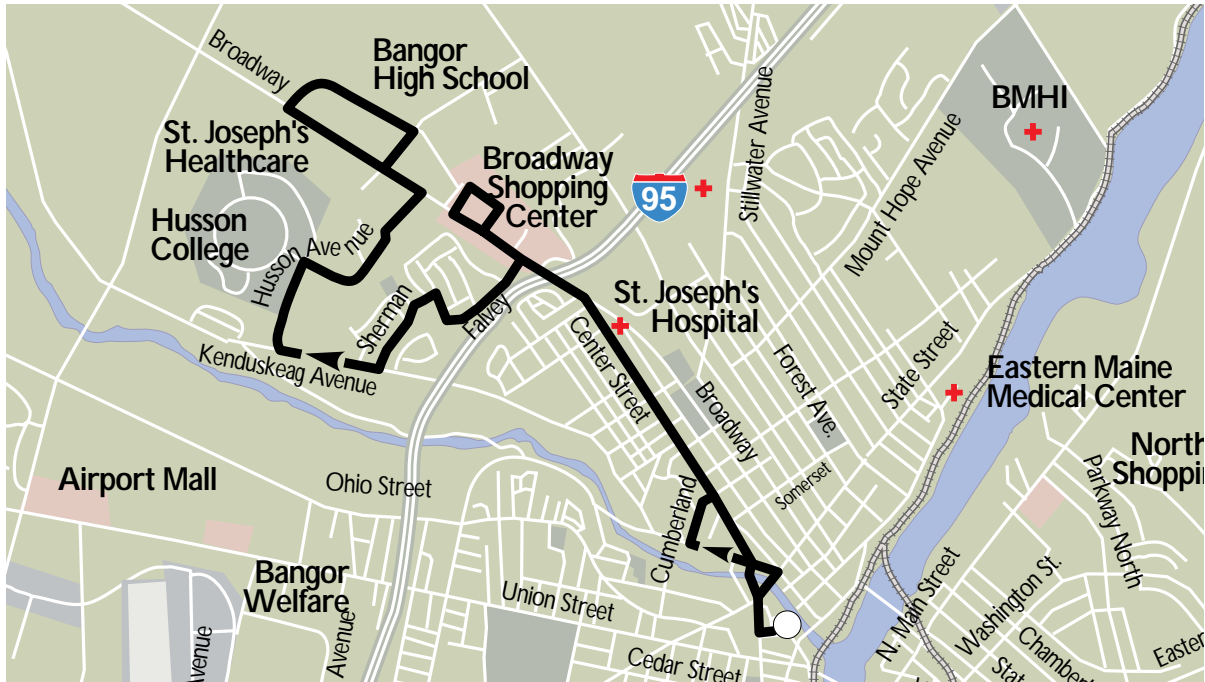
7.1.4 Add a second bus and extend the Center Street route to the Airport Mall

Another approach might involve extending the Center Street route to the Airport Mall via Husson Avenue, Kenduskeag Avenue, and the Griffin Road. Buses would offer direct service in both directions between downtown and the Broadway Shopping Center. This strategy eliminates direct bus service through the Bangor Gardens neighborhood west of Broadway Shopping Center. A map and timetable for this route are presented in Figure 7.4.

A future roadway link between the Husson College campus and Griffin Road would speed up the route by eliminating the need to operate via Kenduskeag Avenue, while also improving service to Husson College.

This approach provides a new link between the Broadway Shopping Center and the Airport Mall, while maintaining 30-minute service for Husson College and surrounding neighborhoods. At the same time, it eliminates service to Bangor Gardens and it fails to serve St. Joseph's Healthcare, Bangor High School, and other locations adjacent to outer Broadway.

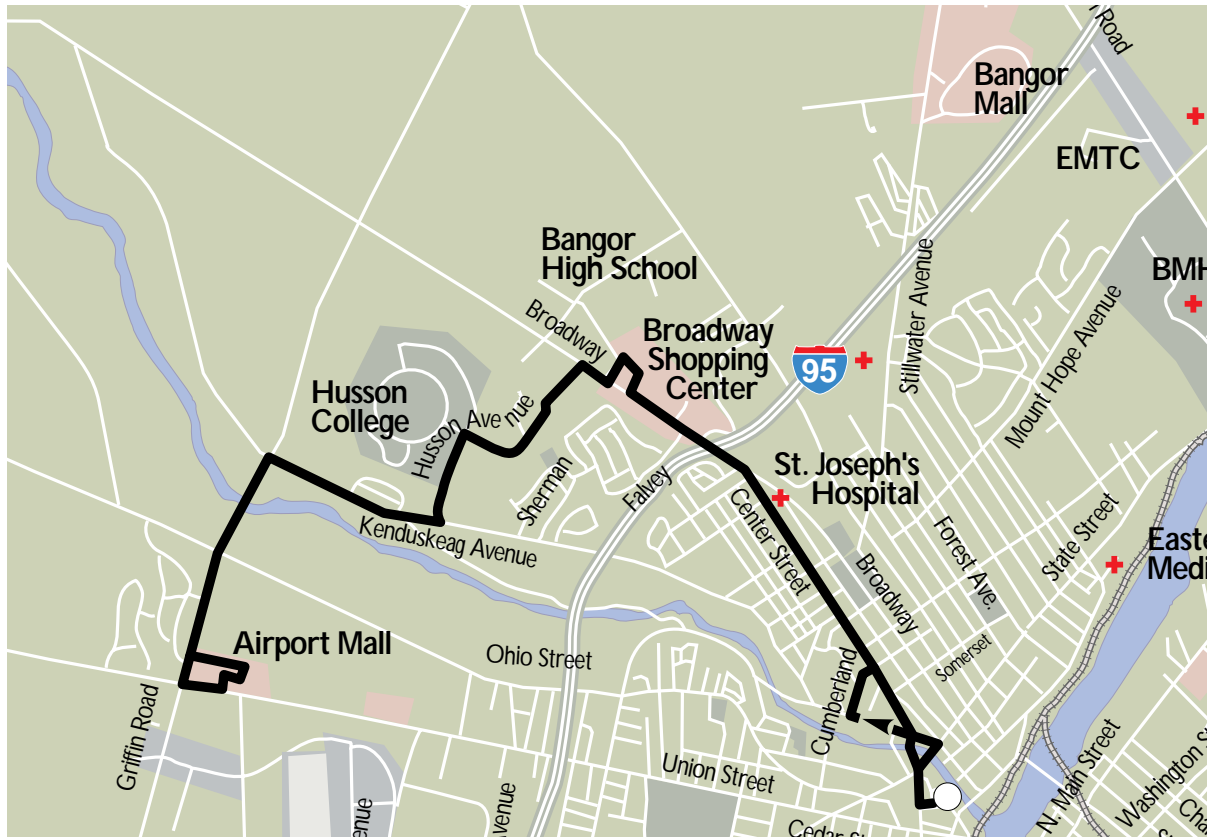
Figure 7.3 Center Street Route Extended to Bangor High School



2 BUSES: EXTEND CENTER STREET ROUTE TO BANGOR HIGH SCHOOL

Bangor Depot	Broadway St. Joseph Hospital	Broadway Shopping Center	Husson College	arrive High School	depart High School	Husson College	Broadway Shopping Center	Broadway St. Joseph Hospital	Bangor Depot
6:15 a	6:22 a	6:26 a	6:35 a	6:39 a	6:42 a	6:46 a	6:55 a	6:58 a	7:05 a
6:45 a	6:52 a	6:56 a	7:05 a	7:09 a	7:12 a	7:16 a	7:25 a	7:28 a	7:35 a
7:15 a	7:22 a	7:26 a	7:35 a	7:39 a	7:42 a	7:46 a	7:55 a	7:58 a	8:05 a
7:45 a	7:52 a	7:56 a	8:05 a	8:09 a	8:12 a	8:16 a	8:25 a	8:28 a	8:35 a
8:15 a	8:22 a	8:26 a	8:35 a	8:39 a	8:42 a	8:46 a	8:55 a	8:58 a	9:05 a
8:45 a	8:52 a	8:56 a	9:05 a	9:09 a	9:12 a	9:16 a	9:25 a	9:28 a	9:35 a
9:15 a	9:22 a	9:26 a	9:35 a	9:39 a	9:42 a	9:46 a	9:55 a	9:58 a	10:05 a
9:45 a	9:52 a	9:56 a	10:05 a	10:09 a	10:12 a	10:16 a	10:25 a	10:28 a	10:35 a
10:15 a	10:22 a	10:26 a	10:35 a	10:39 a	10:42 a	10:46 a	10:55 a	10:58 a	11:05 a
10:45 a	10:52 a	10:56 a	11:05 a	11:09 a	11:12 a	11:16 a	11:25 a	11:28 a	11:35 a
11:15 a	11:22 a	11:26 a	11:35 a	11:39 a	11:42 a	11:46 a	11:55 a	11:58 a	12:05 p
11:45 a	11:52 a	11:56 a	12:05 p	12:09 p	12:12 p	12:16 p	12:25 p	12:28 p	12:35 p
12:15 p	12:22 p	12:26 p	12:35 p	12:39 p	12:42 p	12:46 p	12:55 p	12:58 p	1:05 p
12:45 p	12:52 p	12:56 p	1:05 p	1:09 p	1:12 p	1:16 p	1:25 p	1:28 p	1:35 p
1:15 p	1:22 p	1:26 p	1:35 p	1:39 p	1:42 p	1:46 p	1:55 p	1:58 p	2:05 p
1:45 p	1:52 p	1:56 p	2:05 p	2:09 p	2:12 p	2:16 p	2:25 p	2:28 p	2:35 p
2:15 p	2:22 p	2:26 p	2:35 p	2:39 p	2:42 p	2:46 p	2:55 p	2:58 p	3:05 p
2:45 p	2:52 p	2:56 p	3:05 p	3:09 p	3:12 p	3:16 p	3:25 p	3:28 p	3:35 p
3:15 p	3:22 p	3:26 p	3:35 p	3:39 p	3:42 p	3:46 p	3:55 p	3:58 p	4:05 p
3:45 p	3:52 p	3:56 p	4:05 p	4:09 p	4:12 p	4:16 p	4:25 p	4:28 p	4:35 p
4:15 p	4:22 p	4:26 p	4:35 p	4:39 p	4:42 p	4:46 p	4:55 p	4:58 p	5:05 p
4:45 p	4:52 p	4:56 p	5:05 p	5:09 p	5:12 p	5:16 p	5:25 p	5:28 p	5:35 p
5:15 p	5:22 p	5:26 p	5:35 p	5:39 p	5:42 p	5:46 p	5:55 p	5:58 p	6:05 p
5:45 p	5:52 p	5:56 p	6:05 p	6:09 p	6:12 p	6:16 p	6:25 p	6:28 p	6:35 p

Figure 7.4 Center Street Route Extended to the Airport Mall



2 BUSES: EXTEND CENTER STREET TO AIRPORT MALL

	Broadway		arrive	depart	Broadway				
Bangor Depot	St. Joseph Hospital	Shopping Center	Husson College	Airport Mall	Airport Mall	Husson College	Shopping Center	St. Joseph Hospital	Bangor Depot
6:15 a	6:22 a	6:25 a	6:28 a	6:35 a	6:40 a	6:50 a	6:55 a	6:58 a	7:05 a
6:45 a	6:52 a	6:55 a	6:58 a	7:05 a	7:10 a	7:20 a	7:25 a	7:28 a	7:35 a
7:15 a	7:22 a	7:25 a	7:28 a	7:35 a	7:40 a	7:50 a	7:55 a	7:58 a	8:05 a
7:45 a	7:52 a	7:55 a	7:58 a	8:05 a	8:10 a	8:20 a	8:25 a	8:28 a	8:35 a
8:15 a	8:22 a	8:25 a	8:28 a	8:35 a	8:40 a	8:50 a	8:55 a	8:58 a	9:05 a
8:45 a	8:52 a	8:55 a	8:58 a	9:05 a	9:10 a	9:20 a	9:25 a	9:28 a	9:35 a
9:15 a	9:22 a	9:25 a	9:28 a	9:35 a	9:40 a	9:50 a	9:55 a	9:58 a	10:05 a
9:45 a	9:52 a	9:55 a	9:58 a	10:05 a	10:10 a	10:20 a	10:25 a	10:28 a	10:35 a
10:15 a	10:22 a	10:25 a	10:28 a	10:35 a	10:40 a	10:50 a	10:55 a	10:58 a	11:05 a
10:45 a	10:52 a	10:55 a	10:58 a	11:05 a	11:10 a	11:20 a	11:25 a	11:28 a	11:35 a
11:15 a	11:22 a	11:25 a	11:28 a	11:35 a	11:40 a	11:50 a	11:55 a	11:58 a	12:05 p
11:45 a	11:52 a	11:55 a	11:58 a	12:05 p	12:10 p	12:20 p	12:25 p	12:28 p	12:35 p
12:15 p	12:22 p	12:25 p	12:28 p	12:35 p	12:40 p	12:50 p	12:55 p	12:58 p	1:05 p
12:45 p	12:52 p	12:55 p	12:58 p	1:05 p	1:10 p	1:20 p	1:25 p	1:28 p	1:35 p
1:15 p	1:22 p	1:25 p	1:28 p	1:35 p	1:40 p	1:50 p	1:55 p	1:58 p	2:05 p
1:45 p	1:52 p	1:55 p	1:58 p	2:05 p	2:10 p	2:20 p	2:25 p	2:28 p	2:35 p
2:15 p	2:22 p	2:25 p	2:28 p	2:35 p	2:40 p	2:50 p	2:55 p	2:58 p	3:05 p
2:45 p	2:52 p	2:55 p	2:58 p	3:05 p	3:10 p	3:20 p	3:25 p	3:28 p	3:35 p
3:15 p	3:22 p	3:25 p	3:28 p	3:35 p	3:40 p	3:50 p	3:55 p	3:58 p	4:05 p
3:45 p	3:52 p	3:55 p	3:58 p	4:05 p	4:10 p	4:20 p	4:25 p	4:28 p	4:35 p
4:15 p	4:22 p	4:25 p	4:28 p	4:35 p	4:40 p	4:50 p	4:55 p	4:58 p	5:05 p
4:45 p	4:52 p	4:55 p	4:58 p	5:05 p	5:10 p	5:20 p	5:25 p	5:28 p	5:35 p
5:15 p	5:22 p	5:25 p	5:28 p	5:35 p	-	-	-	-	-
5:45 p	5:52 p	5:55 p	5:58 p	6:05 p	-	-	-	-	-

7.1.5 Extend Center Street route to Outer Broadway

Yet another alternative would be to add a second bus and extend the Center Street route to the Birch Hill Estates Trailer Park. At key times during the day, this route could be extended even further to Bomarc Industrial Park.

After proceeding directly from downtown Bangor to the Broadway Shopping Center, the Center Street bus would serve the Bangor Gardens neighborhood and Husson College. It would travel to Broadway via Husson Avenue, and then proceed north on Broadway to Birch Hill Estates. After turning in the traffic circle at the trailer park, the bus would return to Husson College via Broadway and Husson Avenue. If there is sufficient time, it may be possible to turn into the driveway to offer a front door stop at St. Joseph's Healthcare.

After returning to Husson College, the bus would proceed to Broadway Shopping Center. While it might be better to return to the shopping center via Bangor Gardens, there does not appear to be sufficient time for this. Instead, the bus will likely need to travel from Husson College to the Shopping Center via Husson Avenue.

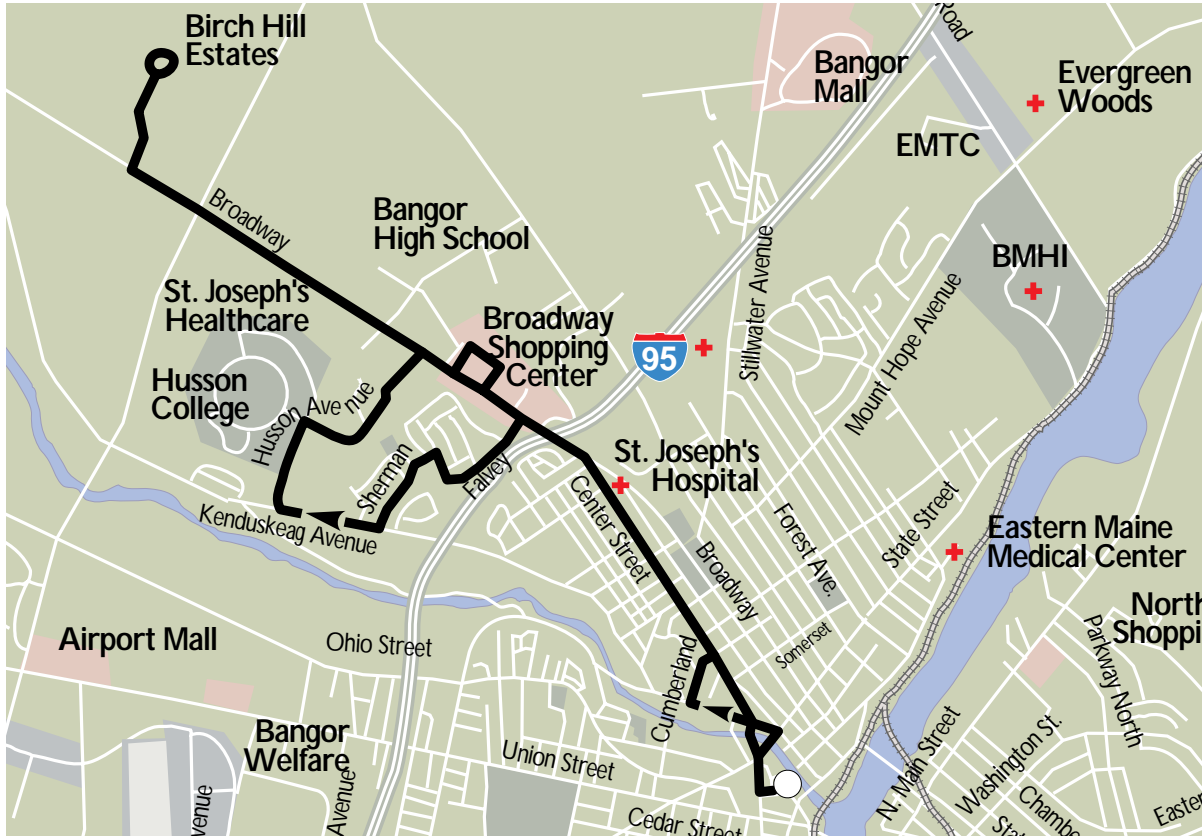
At key times, it may be possible to extend this route to the Phoenix Industries facility at Bomarc Industrial Park. This would likely require bypassing Bangor Gardens and Husson College on trips that are extended to Bomarc.

The main advantage of this approach is that it adds service to new residential areas, as well as to healthcare and retail facilities on outer Broadway.

A major drawback is that Bangor Gardens residents would face an indirect and time-consuming bus ride for trips inbound to downtown Bangor. The resulting route may be somewhat confusing for people along Husson Avenue, because some eastbound buses will be heading toward outer Broadway, while others will be heading toward downtown. There is also a danger that this longer route will result in future on-time problems if traffic delays worsen along Broadway.

A map and timetable for this alternative are presented in Figure 7.5.

Figure 7.5 Center Street Route Extended to Birch Hill Trailer Park



2 BUSES: EXTEND CENTER STREET TO OUTER BROADWAY

Bangor Depot	St. Joseph Hospital	Broadway Shopping Center	Husson College	Birch Hill Estates	St. Joe's Health care	Husson College	Broadway Shopping Center	St. Joseph Hospital	Bangor Depot
6:15 a	6:22 a	6:26 a	6:34 a	6:42 a	6:47 a	6:51 a	6:55 a	6:58 a	7:05 a
6:45 a	6:52 a	6:56 a	7:04 a	7:12 a	7:17 a	7:21 a	7:25 a	7:28 a	7:35 a
7:15 a	7:22 a	7:26 a	7:34 a	7:42 a	7:47 a	7:51 a	7:55 a	7:58 a	8:05 a
7:45 a	7:52 a	7:56 a	8:04 a	8:12 a	8:17 a	8:21 a	8:25 a	8:28 a	8:35 a
8:15 a	8:22 a	8:26 a	8:34 a	8:42 a	8:47 a	8:51 a	8:55 a	8:58 a	9:05 a
8:45 a	8:52 a	8:56 a	9:04 a	9:12 a	9:17 a	9:21 a	9:25 a	9:28 a	9:35 a
9:15 a	9:22 a	9:26 a	9:34 a	9:42 a	9:47 a	9:51 a	9:55 a	9:58 a	10:05 a
9:45 a	9:52 a	9:56 a	10:04 a	10:12 a	10:17 a	10:21 a	10:25 a	10:28 a	10:35 a
10:15 a	10:22 a	10:26 a	10:34 a	10:42 a	10:47 a	10:51 a	10:55 a	10:58 a	11:05 a
10:45 a	10:52 a	10:56 a	11:04 a	11:12 a	11:17 a	11:21 a	11:25 a	11:28 a	11:35 a
11:15 a	11:22 a	11:26 a	11:34 a	11:42 a	11:47 a	11:51 a	11:55 a	11:58 a	12:05 p
11:45 a	11:52 a	11:56 a	12:04 p	12:12 p	12:17 p	12:21 p	12:25 p	12:28 p	12:35 p
12:15 p	12:22 p	12:26 p	12:34 p	12:42 p	12:47 p	12:51 p	12:55 p	12:58 p	1:05 p
12:45 p	12:52 p	12:56 p	1:04 p	1:12 p	1:17 p	1:21 p	1:25 p	1:28 p	1:35 p
1:15 p	1:22 p	1:26 p	1:34 p	1:42 p	1:47 p	1:51 p	1:55 p	1:58 p	2:05 p
1:45 p	1:52 p	1:56 p	2:04 p	2:12 p	2:17 p	2:21 p	2:25 p	2:28 p	2:35 p
2:15 p	2:22 p	2:26 p	2:34 p	2:42 p	2:47 p	2:51 p	2:55 p	2:58 p	3:05 p
2:45 p	2:52 p	2:56 p	3:04 p	3:12 p	3:17 p	3:21 p	3:25 p	3:28 p	3:35 p
3:15 p	3:22 p	3:26 p	3:34 p	3:42 p	3:47 p	3:51 p	3:55 p	3:58 p	4:05 p
3:45 p	3:52 p	3:56 p	4:04 p	4:12 p	4:17 p	4:21 p	4:25 p	4:28 p	4:35 p
4:15 p	4:22 p	4:26 p	4:34 p	4:42 p	4:47 p	4:51 p	4:55 p	4:58 p	5:05 p
4:45 p	4:52 p	4:56 p	5:04 p	5:12 p	5:17 p	5:21 p	5:25 p	5:28 p	5:35 p
5:15 p	5:22 p	5:26 p	5:34 p	5:42 p	5:47 p	5:51 p	5:55 p	5:58 p	6:05 p
5:45 p	5:52 p	5:56 p	6:04 p	6:12 p	6:17 p	6:21 p	6:25 p	6:28 p	6:35 p

7.1.6 Shorten the Center Street route and add a new Mall Connector route

Yet another strategy for Center Street would be to shorten the route by turning buses at the Broadway Shopping Center, while adding a new route to link the Broadway Shopping Center with the Airport Mall and the Bangor Mall.

One bus would serve the shortened Center Street route every 30 minutes. A second bus would link the three retail centers every 60 minutes. Maps and timetables for this route configuration are presented in Figures 7.6 and 7.7.

The major drawback to this strategy is the loss of direct bus service between downtown Bangor and Husson Avenue. With only hourly service on the new route, it is not possible to offer timed connections with the Center Street bus in both directions. It will probably be more important to offer timed connections between the new Mall Connector and buses on the Capehart route.

Inbound Husson Avenue riders should be able transfer to an inbound Stillwater Avenue bus at the Bangor Mall. Outbound Husson Avenue riders could transfer from a Capehart bus to the new Shopping Center route. These arrangements take longer and they are more confusing than the current direct Center Street service to Husson Avenue and Husson College.

(A better but more expensive approach would be to use two new buses to provide 30-minute service on the new Mall Connector. It may be more realistic, however, to test this new service idea with hourly service before adding an additional bus.)

The primary advantages of this strategy are a streamlined Center Street route, direct access between downtown and the Broadway Shopping Center, and a new direct link between Bangor shopping malls to benefit passengers throughout the transit system. The main disadvantages are the loss of service to Bangor Gardens, decreased service frequency for Husson College and Husson Avenue residences, and a time-consuming and possibly confusing transfer for travel between Husson Avenue neighborhoods and downtown Bangor.

Ideally, the Mall Connector bus would include a stop at K-Mart near the Bangor Mall, while also serving Ohio Street between Griffin Road and Westland Street. If there is not enough time to accomplish both, it may be more important to add service to the Ohio Street segment. Time constraints will likely necessitate serving Ohio Street on westbound trips only.

Figure 7.6 New Mall Connector route with Shortened Center Street route



Airport Mall	Husson College	Broadway Shopping Center	arrive Bangor Mall	depart Bangor Mall	Broadway Shopping Center	Husson College	Center Street	Airport Mall
6:30 a	6:37 a	6:40 a	6:50 a	6:55 a	7:05 a	7:10 a	7:15 a	7:20 a
7:30 a	7:37 a	7:40 a	7:50 a	7:55 a	8:05 a	8:10 a	8:15 a	8:20 a
8:30 a	8:37 a	8:40 a	8:50 a	8:55 a	9:05 a	9:10 a	9:15 a	9:20 a
9:30 a	9:37 a	9:40 a	9:50 a	9:55 a	10:05 a	10:10 a	10:15 a	10:20 a
10:30 a	10:37 a	10:40 a	10:50 a	10:55 a	11:05 a	11:10 a	11:15 a	11:20 a
11:30 a	11:37 a	11:40 a	11:50 a	11:55 a	12:05 p	12:10 p	12:15 p	12:20 p
12:30 p	12:37 p	12:40 p	12:50 p	12:55 p	1:05 p	1:10 p	1:15 p	1:20 p
1:30 p	1:37 p	1:40 p	1:50 p	1:55 p	2:05 p	2:10 p	2:15 p	2:20 p
2:30 p	2:37 p	2:40 p	2:50 p	2:55 p	3:05 p	3:10 p	3:15 p	3:20 p
3:30 p	3:37 p	3:40 p	3:50 p	3:55 p	4:05 p	4:10 p	4:15 p	4:20 p
4:30 p	4:37 p	4:40 p	4:50 p	4:55 p	5:05 p	5:10 p	5:15 p	5:20 p
5:30 p	5:37 p	5:40 p	5:50 p	5:55 p	6:05 p	6:10 p	6:15 p	6:20 p

Figure 7.7 Timetable for a Shortened Center Street route
With limited trips through Bangor Gardens

Bangor Depot	St. Joseph Hospital	Kenduskg/ Sherman	Broadway Shopping Center	St. Joseph Hospital	Bangor Depot
6:15 a	6:22 a	-	6:28 a	6:31 a	6:38 a
6:45 a	6:52 a	-	6:58 a	7:01 a	7:08 a
7:15 a	7:22 a	7:25 a	7:28 a	7:31 a	7:38 a
7:45 a	7:52 a	-	7:58 a	8:01 a	8:08 a
8:15 a	8:22 a	8:25 a	8:28 a	8:31 a	8:38 a
8:45 a	8:52 a	-	8:58 a	9:01 a	9:08 a
9:15 a	9:22 a	-	9:28 a	9:31 a	9:38 a
9:45 a	9:52 a	-	9:58 a	10:01 a	10:08 a
10:15 a	10:22 a	10:25 a	10:28 a	10:31 a	10:38 a
10:45 a	10:52 a	-	10:58 a	11:01 a	11:08 a
11:15 a	11:22 a	-	11:28 a	11:31 a	11:38 a
11:45 a	11:52 a	-	11:58 a	12:01 p	12:08 p
12:15 p	12:22 p	12:25 p	12:28 p	12:31 p	12:38 p
12:45 p	12:52 p	-	12:58 p	1:01 p	1:08 p
1:15 p	1:22 p	-	1:28 p	1:31 p	1:38 p
1:45 p	1:52 p	-	1:58 p	2:01 p	2:08 p
2:15 p	2:22 p	2:25 p	2:28 p	2:31 p	2:38 p
2:45 p	2:52 p	-	2:58 p	3:01 p	3:08 p
3:15 p	3:22 p	-	3:28 p	3:31 p	3:38 p
3:45 p	3:52 p	-	3:58 p	4:01 p	4:08 p
4:15 p	4:22 p	-	4:28 p	4:31 p	4:38 p
4:45 p	4:52 p	-	4:58 p	5:01 p	5:08 p
5:15 p	5:22 p	5:25 p	5:28 p	5:31 p	5:38 p
5:45 p	5:52 p	-	5:58 p	6:01 p	6:08 p

7.1.7 Provide limited service to Bangor Gardens with shortened Center Street route

A shortened Center Street route could operate through the Bangor Gardens neighborhood on request. This would allow most Center Street bus trips to remain on Center Street and Broadway, reserving time for wheelchairs and traffic delays. On request, outbound buses could turn left from Center Street to Linden Street, followed by a right on Kenduskeag Avenue and a right on Sherman Street.

An alternative to “on request” service would be to designate a limited number of trips to operate through the Bangor Gardens neighborhood. This would avoid requiring residents of Bangor Gardens to request service and the resulting need for dispatchers and drivers to make service adjustments during the course of the day.

Buses that serve Bangor Gardens will require an extra 3 or 4 minutes for a round trip. Drivers may have difficulty remaining on time if wheelchair passengers board during a trip that has been diverted through Bangor Gardens. For this reason, only a limited number of trips should be routed through this neighborhood.

7.2 Restructure Mount Hope and add a new Stillwater Avenue Route

Problems with the current Mount Hope route stem from its circuitous one-way loop that results in long, indirect rides for important origin-destination pairs. The current practice of using two buses on the route allows consistent 30-minute departures from downtown, but results in time-consuming rides and a 22-minute downtown layover for passengers transferring to other routes. These issues are discussed in greater detail in Chapter 5.

One solution for Mount Hope buses is to split the service into two routes. One bus would follow the existing outbound route via Mount Hope Avenue and the Hogan Road and return via this same route. The other would travel outbound and inbound via Stillwater Avenue. Both routes would offer a full circuit of the Mall area, with scheduled stops at the Bangor Mall, K-Mart, Wal-Mart, and Shaws.

Each route should be allotted a full 60 minutes for a complete round trip. In the Mall area, the Mount Hope bus would stop first at Wal-Mart, followed by Shaws, K-Mart, and the Bangor Mall. After a brief layover at the Mall entrance, the Mount Hope bus would return to K-Mart, Wal-Mart, and Shaws before returning to downtown via Hogan Road and Mount Hope Avenue.

The Stillwater Avenue bus would stop first at the Bangor Mall, followed by K-Mart and Wal-Mart. After a brief layover at Wal-Mart, this bus would proceed back to K-Mart and the Bangor Mall before returning to downtown Bangor via Stillwater Avenue.

For maximum service quality, the best approach would be to operate two buses on the Stillwater Avenue route with service every 30 minutes. A third bus could serve the Mount Hope route every 60 minutes. But this strategy may be too expensive. A more affordable approach would be to operate one bus on each route, resulting in 30-minute service to the Bangor Mall, with hourly service for Stillwater Avenue and hourly service for Mount Hope Avenue.

The Stillwater Avenue bus could depart downtown at 15 minutes past the hour, while the Mount Hope bus could depart downtown at 45 minutes past the hour. A map showing this service concept is presented in Figure 7.8. Draft timetables are presented in Figure 7.9.

Using two buses throughout the day on these two routes would add three extra service hours per day. This results in a total of approximately 900 hours per year for Monday through Saturday service.

Figure 7.8 Proposed Mount Hope and Stillwater Avenue Routes

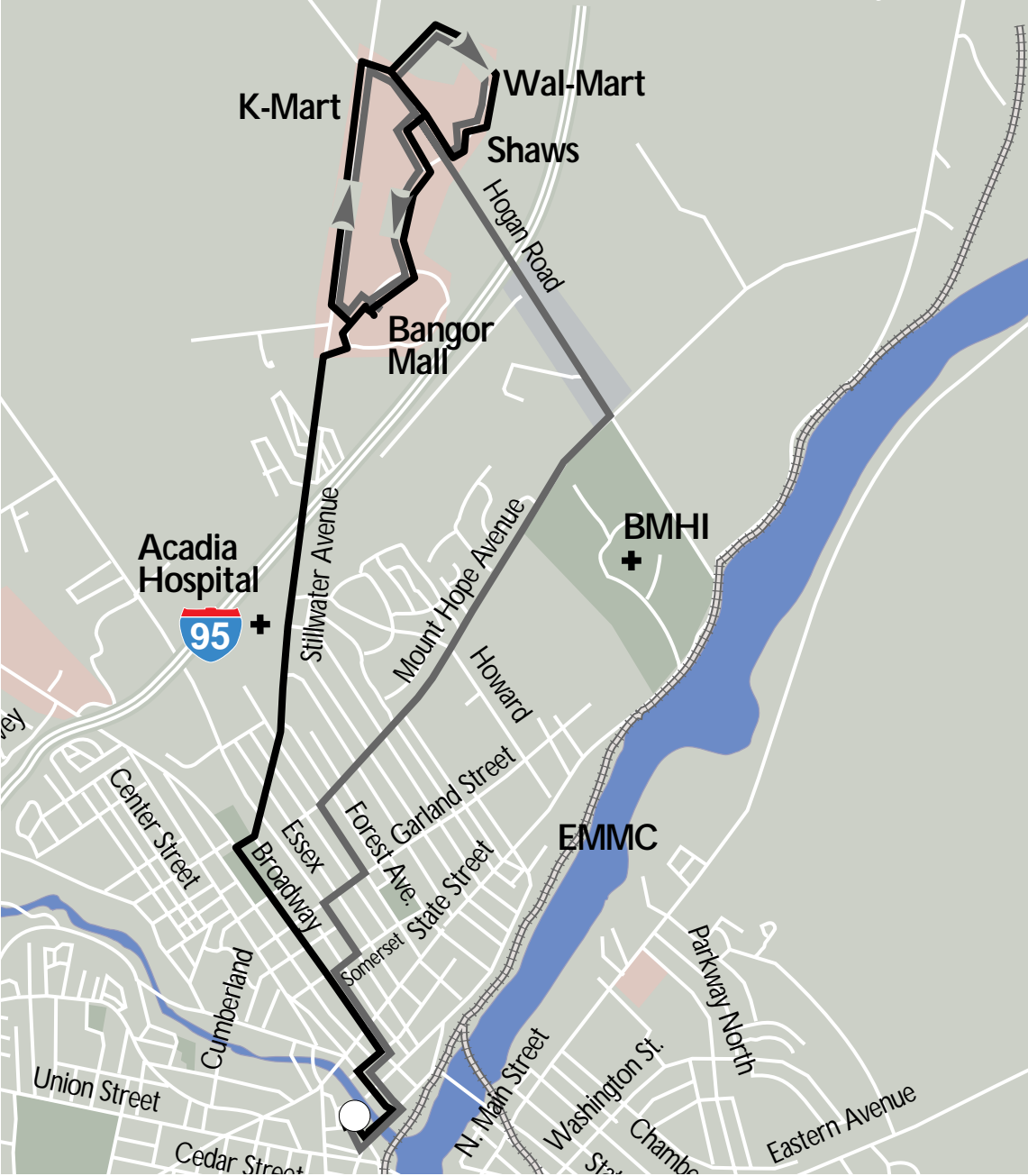


Figure 7.9 Proposed Mount Hope and Stillwater Avenue Timetables

PROPOSED STILLWATER AVENUE TIMETABLE

Bangor Depot	Stillwater Avenue	Bangor Mall	K-Mart	arrive Wal-Mart	depart Wal-Mart	K-Mart	Bangor Mall	Stillwater Avenue	Bangor Depot
6:15 a	6:22 a	6:30 a	6:34 a	6:38 a	6:45 a	6:47 a	6:50 a	6:57 a	7:05 a
7:15 a	7:22 a	7:30 a	7:34 a	7:38 a	7:45 a	7:47 a	7:50 a	7:57 a	8:05 a
8:15 a	8:22 a	8:30 a	8:34 a	8:38 a	8:45 a	8:47 a	8:50 a	8:57 a	9:05 a
9:15 a	9:22 a	9:30 a	9:34 a	9:38 a	9:45 a	9:47 a	9:50 a	9:57 a	10:05 a
10:15 a	10:22 a	10:30 a	10:34 a	10:38 a	10:45 a	10:47 a	10:50 a	10:57 a	11:05 a
11:15 a	11:22 a	11:30 a	11:34 a	11:38 a	11:45 a	11:47 a	11:50 a	11:57 a	12:05 p
12:15 p	12:22 p	12:30 p	12:34 p	12:38 p	12:45 p	12:47 p	12:50 p	12:57 p	1:05 p
1:15 p	1:22 p	1:30 p	1:34 p	1:38 p	1:45 p	1:47 p	1:50 p	1:57 p	2:05 p
2:15 p	2:22 p	2:30 p	2:34 p	2:38 p	2:45 p	2:47 p	2:50 p	2:57 p	3:05 p
3:15 p	3:22 p	3:30 p	3:34 p	3:38 p	3:45 p	3:47 p	3:50 p	3:57 p	4:05 p
4:15 p	4:22 p	4:30 p	4:34 p	4:38 p	4:45 p	4:47 p	4:50 p	4:57 p	5:05 p
5:15 p	5:22 p	5:30 p	5:34 p	5:38 p	5:45 p	5:47 p	5:50 p	5:57 p	6:05 p

PROPOSED MOUNT HOPE TIMETABLE

Bangor Depot	Mt Hope/ Forest	Wal-Mart	K-Mart	arrive Bangor Mall	depart Bangor Mall	K-Mart	Wal-Mart	Mt Hope/ Forest	Bangor Depot
6:45 a	6:53 a	7:05 a	7:07 a	7:10 a	7:15 a	7:19 a	7:23 a	7:33 a	7:40 a
7:45 a	7:53 a	8:05 a	8:07 a	8:10 a	8:15 a	8:19 a	8:23 a	8:33 a	8:40 a
8:45 a	8:53 a	9:05 a	9:07 a	9:10 a	9:15 a	9:19 a	9:23 a	9:33 a	9:40 a
9:45 a	9:53 a	10:05 a	10:07 a	10:10 a	10:15 a	10:19 a	10:23 a	10:33 a	10:40 a
10:45 a	10:53 a	11:05 a	11:07 a	11:10 a	11:15 a	11:19 a	11:23 a	11:33 a	11:40 a
11:45 a	11:53 a	12:05 p	12:07 p	12:10 p	12:15 p	12:19 p	12:23 p	12:33 p	12:40 p
12:45 p	12:53 p	1:05 p	1:07 p	1:10 p	1:15 p	1:19 p	1:23 p	1:33 p	1:40 p
1:45 p	1:53 p	2:05 p	2:07 p	2:10 p	2:15 p	2:19 p	2:23 p	2:33 p	2:40 p
2:45 p	2:53 p	3:05 p	3:07 p	3:10 p	3:15 p	3:19 p	3:23 p	3:33 p	3:40 p
3:45 p	3:53 p	4:05 p	4:07 p	4:10 p	4:15 p	4:19 p	4:23 p	4:33 p	4:40 p
4:45 p	4:53 p	5:05 p	5:07 p	5:10 p	5:15 p	5:19 p	5:23 p	5:33 p	5:40 p
5:45 p	5:53 p	6:05 p	6:07 p	6:10 p	6:15 p	6:19 p	6:23 p	6:33 p	6:40 p

7.3 Add Evening Service to Existing Routes

Transit plans completed in 1984 and 1996 both included proposals for extending weekday bus service in the Bangor region to include evening hours. The need for evening bus service continues to be a key concern for many area bus riders.

This study examined three approaches to extending service hours: (1) add one extra trip at the end of the day on each route; (2) add extra evening trips on the Old Town route only, while leaving other routes unchanged; (3) extend hours on all routes.

7.3.1 Add 6:15 p.m. trips on all routes

With the current schedule, most routes offer a final departure from downtown Bangor at 5:15 p.m. Capehart, Hammond Street, and Mount Hope include 5:45 p.m. downtown departures. One way to increase the convenience of bus service for commuters would be to include 6:15 departures on all seven bus routes.

For Bangor routes, this would add one hour each on the Capehart, Center Street, and Mount Hope routes and a half hour on the Hammond Street route, for a net increase of 3.5 hours per day. It would add one hour per day to the Hampden route, one-half hour to Brewer, and one and one-half hours to Old Town.

If the extra trip operates on weekdays only, this will result in an increase of approximately 875 hours per year for Bangor, 250 hours for Hampden, 125 hours for Brewer, and 375 hours for Old Town, Orono, Veazie, and the University of Maine.

7.3.2 Add evening service to the Old Town route only

Evening service to and from the University of Maine could be offered with one bus by adding 6:45 p.m., 8:15 p.m., and 9:45 p.m. departures from the downtown Bangor terminal. With this approach, the last evening bus from the University of Maine to Old Town would depart at 10:15 p.m. The last bus to downtown Bangor would depart the University at 10:45 p.m.

Currently the last southbound evening bus from the University departs at 6:15 p.m. With the above change, buses to Bangor would also depart the University at 7:45 p.m., 9:15 p.m. and 10:45 p.m.

This change would add 4.5 service hours per day to the Old Town route. If evening service operates on weekdays only, this would result in an increase of approximately 1,125 hours per year.

7.3.3 Add reduced-frequency evening service on all routes

Evening service could be added to all routes by operating six evening buses. This could result in hourly service on most routes, with service every 90 minutes on Old Town.

<i>Route</i>	<i>Vehicles</i>	<i>Frequency</i>	<i>Last Bangor departure</i>	<i>Daily hours</i>	<i>Annual hours</i>
Center Street/ Hammond Street	1 bus	Hourly	Center 7:45 pm Hammond 8:15 pm	3	750
Capehart	1 bus	Hourly	9:15 PM	4	1,000
Mount Hope	1 bus	Hourly	8:15 PM	3	750
Brewer	1 bus	Hourly	7:45 PM	3	750
Hampden	1 bus	Hourly	7:15 PM	2	500
Old Town	1 bus	90 minutes	9:45 PM	4.5	1,125

This would result in a net increase of approximately 4,875 weekday service hours per year. The net increase for Bangor routes would be 2,500 hours per year.

7.4 Add a second Brewer bus for outer Wilson Street

7.4.1 New Wilson Street route

Bangor has received an Access to Jobs grant to add a second bus in Brewer to serve new facilities planned for outer Wilson Street. This includes a new Super Wal-Mart and a proposed Eastern Maine Healthcare office facility.

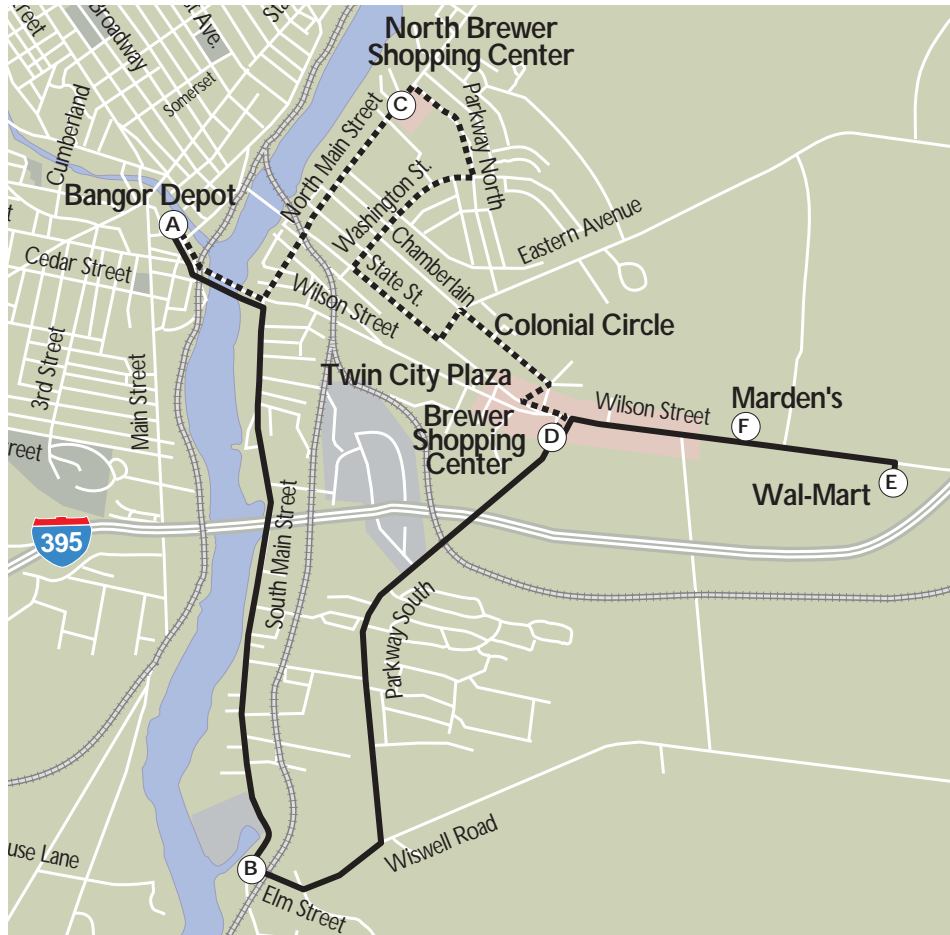
The most straightforward approach to designing this new service might be to operate directly between downtown Bangor and the Eastern Maine Healthcare facility via Wilson Street. Both inbound and outbound buses should include a stop at the Brewer Shopping Center. Inbound buses would include stops at Wal-Mart and Mardens. These buses should bypass the Twin City Plaza, leaving Brewer north and south loops to serve this location.

While there may be some interest in extending this Wilson Street route to the Cedar Haven Mobile Home Park in Holden, there does not appear to be enough time to accomplish this reliably within a 30-minute schedule window.

7.4.2 Operate separate buses on North and South routes

Another alternative for Brewer would be to use one bus on the North Brewer route, and the second bus on a South Brewer route. Both buses would have one full hour to complete a round trip. This should allow enough time for two-way service on both routes instead of one-way loops. Both routes would serve the Brewer Shopping Center, Eastern Maine Healthcare, Wal-Mart, and Mardens.

Figure 7.10 Brewer Service Design Alternative



A	B	C	D	E	E	F	D	C	B	A
Bangor Depot	South Main & Elm	North Brewer	Brewer Shopping Center	arrive Wal-Mart	depart Wal-Mart	Marden's	Brewer Shopping Center	North Brewer	South Main & Elm	Bangor Depot
6:45 a	-	-	7:00 a	7:05 a	7:10 a	7:12 a	7:15 a	-	7:25 a	7:35 a
7:15 a	-	7:21 a	7:30 a	7:35 a	7:40 a	7:42 a	7:45 a	7:55 a	-	8:05 a
7:45 a	7:52 a	-	8:00 a	8:05 a	8:10 a	8:12 a	8:15 a	-	8:25 a	8:35 a
8:15 a	-	8:21 a	8:30 a	8:35 a	8:40 a	8:42 a	8:45 a	8:55 a	-	9:05 a
8:45 a	8:52 a	-	9:00 a	9:05 a	9:10 a	9:12 a	9:15 a	-	9:25 a	9:35 a
9:15 a	-	9:21 a	9:30 a	9:35 a	9:40 a	9:42 a	9:45 a	9:55 a	-	10:05 a
9:45 a	9:52 a	-	10:00 a	10:05 a	10:10 a	10:12 a	10:15 a	-	10:25 a	10:35 a
10:15 a	-	10:21 a	10:30 a	10:35 a	10:40 a	10:42 a	10:45 a	10:55 a	-	11:05 a
10:45 a	10:52 a	-	11:00 a	11:05 a	11:10 a	11:12 a	11:15 a	-	11:25 a	11:35 a
11:15 a	-	11:21 a	11:30 a	11:35 a	11:40 a	11:42 a	11:45 a	11:55 a	-	12:05 p
11:45 a	11:52 a	-	12:00 p	12:05 p	12:10 p	12:12 p	12:15 p	-	12:25 p	12:35 p
12:15 p	-	12:21 p	12:30 p	12:35 p	12:40 p	12:42 p	12:45 p	12:55 p	-	1:05 p
12:45 p	12:52 p	-	1:00 p	1:05 p	1:10 p	1:12 p	1:15 p	-	1:25 p	1:35 p
1:15 p	-	1:21 p	1:30 p	1:35 p	1:40 p	1:42 p	1:45 p	1:55 p	-	2:05 p
1:45 p	1:52 p	-	2:00 p	2:05 p	2:10 p	2:12 p	2:15 p	-	2:25 p	2:35 p
2:15 p	-	2:21 p	2:30 p	2:35 p	2:40 p	2:42 p	2:45 p	2:55 p	-	3:05 p
2:45 p	2:52 p	-	3:00 p	3:05 p	3:10 p	3:12 p	3:15 p	-	3:25 p	3:35 p
3:15 p	-	3:21 p	3:30 p	3:35 p	3:40 p	3:42 p	3:45 p	3:55 p	-	4:05 p
3:45 p	3:52 p	-	4:00 p	4:05 p	4:10 p	4:12 p	4:15 p	-	4:25 p	4:35 p
4:15 p	-	4:21 p	4:30 p	4:35 p	4:40 p	4:42 p	4:45 p	4:55 p	-	5:05 p
4:45 p	4:52 p	-	5:00 p	5:05 p	5:10 p	5:12 p	5:15 p	-	5:25 p	5:35 p
5:15 p	-	5:21 p	5:30 p	5:35 p	5:40 p	5:42 p	5:45 p	5:55 p	-	6:05 p
5:45 p	5:52 p	-	6:00 p	6:05 p	6:10 p	6:12 p	6:15 p	-	6:25 p	6:35 p

A map and timetable for this alternative are presented in Figure 7.10. This approach should offer significant benefits to Brewer residents. People who live along north and south routes would have (1) direct service to and from downtown Bangor; (2) direct service to and from Wilson Street shopping centers; and (3) continued hourly headways.

This would result somewhat longer rides between downtown Bangor and Wilson Street destinations. However, the added convenience for Brewer residents will likely outweigh the somewhat longer rides for non-Brewer residents.

7.5 Increase the frequency of the Old Town route

Four trends suggest a need to return the Old Town route to 30-minute headways, at least during the academic school year:

- (1) Use of the Old Town bus by University of Maine students has increased dramatically following the introduction of the Maine Card program offering free rides for University students and staff.
- (2) University enrollment continues to increase, and officials expect this trend to continue until the Orono campus returns to a level of 12,000 students, a 19% increase over the 2001 level.
- (3) An on-campus housing shortage has required more University students to look for apartments in surrounding communities.
- (4) The University expects to move toward a more pedestrian friendly campus, with reduced on-campus accommodations for automobiles.

The Old Town route currently requires two buses to provide hourly service. Service frequency can be doubled to every 30 minutes by adding a third bus to the route. This would be accomplished by eliminating the 30-minute downtown layovers that are built into the current schedule.

Increasing daytime service to every 30 minutes should add about twelve extra service hours per day to the route (from 25 hours to 37 hours), a 48% increase over current levels. Extending 90-minute service until 11:15 p.m. would add another 4.5 hours per day. This would result in a combined total of roughly 41.3 service hours per day, a 66% increase over the current arrangement.

Adding the third day-time bus, plus increasing Saturday service to hourly would result in adding approximately 3,612 service hours per year. If evening service is included, the net increase is projected to total 4,725 service hours per year.

Timetables showing two alternative service designs are presented in Figures 7.11 and 7.12. Figure 7.11 shows continued service to the University Mall, with all buses traveling in a clockwise direction around an Old Town loop, and no evening service. Figure 7.12 assumes that a new route has been added to serve the University Mall and the Orono Research Park as proposed in Section 7.7. This would allow the Old Town bus to provide direct service in both directions on Route 2. During midday hours, the route could be extended to the Shop ‘n Save in Old Town. Figure 7.12 also includes proposed evening service on the route.

Figure 7.11 Old Town 30-minute Service on Existing Route

Bangor Depot	EMMC	Veazie Toown Office	UM Union	Univ Mall	Old Town	UM Union	Veazie Town Office	EMMC	Bangor Depot
6:15 a	6:20 a	6:29 a	5:42 a	5:51 a	6:00 a	6:15 a	6:25 a	6:35 a	6:42 a
6:45 a	6:50 a	6:59 a	6:42 a	6:51 a	7:00 a	7:15 a	7:25 a	7:35 a	7:42 a
7:15 a	7:20 a	7:29 a	7:12 a	7:21 a	7:30 a	7:45 a	7:55 a	8:05 a	8:12 a
7:45 a	7:50 a	7:59 a	7:42 a	7:51 a	8:00 a	8:15 a	8:25 a	8:35 a	8:42 a
8:15 a	8:20 a	8:29 a	8:12 a	8:21 a	8:30 a	8:45 a	8:55 a	9:05 a	9:12 a
8:45 a	8:50 a	8:59 a	8:42 a	8:51 a	9:00 a	9:15 a	9:25 a	9:35 a	9:42 a
9:15 a	9:20 a	9:29 a	9:12 a	9:21 a	9:30 a	9:45 a	9:55 a	10:05 a	10:12 a
9:45 a	9:50 a	9:59 a	9:42 a	9:51 a	10:00 a	10:15 a	10:25 a	10:35 a	10:42 a
10:15 a	10:20 a	10:29 a	10:12 a	10:21 a	10:30 a	10:45 a	10:55 a	11:05 a	11:12 a
10:45 a	10:50 a	10:59 a	10:42 a	10:51 a	11:00 a	11:15 a	11:25 a	11:35 a	11:42 a
11:15 a	11:20 a	11:29 a	11:12 a	11:21 a	11:30 a	11:45 a	11:55 a	12:05 p	12:12 p
11:45 a	11:50 a	11:59 a	11:42 a	11:51 a	12:00 p	12:15 p	12:25 p	12:35 p	12:42 p
12:15 p	12:20 p	12:29 p	12:12 p	12:21 p	12:30 p	12:45 p	12:55 p	1:05 p	1:12 p
12:45 p	12:50 p	12:59 p	12:42 p	12:51 p	1:00 p	1:15 p	1:25 p	1:35 p	1:42 p
1:15 p	1:20 p	1:29 p	1:12 p	1:21 p	1:30 p	1:45 p	1:55 p	2:05 p	2:12 p
1:45 p	1:50 p	1:59 p	1:42 p	1:51 p	2:00 p	2:15 p	2:25 p	2:35 p	2:42 p
2:15 p	2:20 p	2:29 p	2:12 p	2:21 p	2:30 p	2:45 p	2:55 p	3:05 p	3:12 p
2:45 p	2:50 p	2:59 p	2:42 p	2:51 p	3:00 p	3:15 p	3:25 p	3:35 p	3:42 p
3:15 p	3:20 p	3:29 p	3:12 p	3:21 p	3:30 p	3:45 p	3:55 p	4:05 p	4:12 p
3:45 p	3:50 p	3:59 p	3:42 p	3:51 p	4:00 p	4:15 p	4:25 p	4:35 p	4:42 p
4:15 p	4:20 p	4:29 p	4:12 p	4:21 p	4:30 p	4:45 p	4:55 p	5:05 p	5:12 p
4:45 p	4:50 p	4:59 p	4:42 p	4:51 p	5:00 p	5:15 p	5:25 p	5:35 p	5:42 p
5:15 p	5:20 p	5:29 p	5:12 p	5:21 p	5:30 p	5:45 p	5:55 p	6:05 p	6:12 p
5:45 p	5:50 p	5:59 p	5:42 p	5:51 p	6:00 p	6:15 p	6:25 p	6:35 p	6:42 p
			6:12 p	6:21 p	6:30 p	6:45 p	6:55 p	7:05 p	7:12 p

Figure 7.12 Enhanced Old Town Service

*Half-hour day-time headways with three buses
 Two-way service on Route 2 between Orono and Old Town
 Evening service with 90-minute headways*

Bangor Depot	EMMC	Veazie Town Office	UM Union	Old Town	Shop 'n Save	Old Town	UM Union	Veazie Town Office	EMMC	Bangor Depot
			5:42 a	5:52 a	-	6:02 a	6:15 a	6:25 a	6:35 a	6:42 a
6:15 a	6:20 a	6:29 a	6:42 a	6:52 a	-	7:02 a	7:15 a	7:25 a	7:35 a	7:42 a
6:45 a	6:50 a	6:59 a	7:12 a	7:22 a	-	7:32 a	7:45 a	7:55 a	8:05 a	8:12 a
7:15 a	7:20 a	7:29 a	7:42 a	7:52 a	-	8:02 a	8:15 a	8:25 a	8:35 a	8:42 a
7:45 a	7:50 a	7:59 a	8:12 a	8:22 a	-	8:32 a	8:45 a	8:55 a	9:05 a	9:12 a
8:15 a	8:20 a	8:29 a	8:42 a	8:52 a	8:57 a	9:02 a	9:15 a	9:25 a	9:35 a	9:42 a
8:45 a	8:50 a	8:59 a	9:12 a	9:22 a	9:27 a	9:32 a	9:45 a	9:55 a	10:05 a	10:12 a
9:15 a	9:20 a	9:29 a	9:42 a	9:52 a	9:57 a	10:02 a	10:15 a	10:25 a	10:35 a	10:42 a
9:45 a	9:50 a	9:59 a	10:12 a	10:22 a	10:27 a	10:32 a	10:45 a	10:55 a	11:05 a	11:12 a
10:15 a	10:20 a	10:29 a	10:42 a	10:52 a	10:57 a	11:02 a	11:15 a	11:25 a	11:35 a	11:42 a
10:45 a	10:50 a	10:59 a	11:12 a	11:22 a	11:27 a	11:32 a	11:45 a	11:55 a	12:05 p	12:12 p
11:15 a	11:20 a	11:29 a	11:42 a	11:52 a	11:57 a	12:02 p	12:15 p	12:25 p	12:35 p	12:42 p
11:45 a	11:50 a	11:59 a	12:12 p	12:22 p	12:27 p	12:32 p	12:45 p	12:55 p	1:05 p	1:12 p
12:15 p	12:20 p	12:29 p	12:42 p	12:52 p	12:57 p	1:02 p	1:15 p	1:25 p	1:35 p	1:42 p
12:45 p	12:50 p	12:59 p	1:12 p	1:22 p	1:27 p	1:32 p	1:45 p	1:55 p	2:05 p	2:12 p
1:15 p	1:20 p	1:29 p	1:42 p	1:52 p	1:57 p	2:02 p	2:15 p	2:25 p	2:35 p	2:42 p
1:45 p	1:50 p	1:59 p	2:12 p	2:22 p	2:27 p	2:32 p	2:45 p	2:55 p	3:05 p	3:12 p
2:15 p	2:20 p	2:29 p	2:42 p	2:52 p	2:57 p	3:02 p	3:15 p	3:25 p	3:35 p	3:42 p
2:45 p	2:50 p	2:59 p	3:12 p	3:22 p	3:27 p	3:32 p	3:45 p	3:55 p	4:05 p	4:12 p
3:15 p	3:20 p	3:29 p	3:42 p	3:52 p	3:57 p	4:02 p	4:15 p	4:25 p	4:35 p	4:42 p
3:45 p	3:50 p	3:59 p	4:12 p	4:22 p	4:27 p	4:32 p	4:45 p	4:55 p	5:05 p	5:12 p
4:15 p	4:20 p	4:29 p	4:42 p	4:52 p	-	5:02 p	5:15 p	5:25 p	5:35 p	5:42 p
4:45 p	4:50 p	4:59 p	5:12 p	5:22 p	-	5:32 p	5:45 p	5:55 p	6:05 p	6:12 p
5:15 p	5:20 p	5:29 p	5:42 p	5:52 p	-	6:02 p	6:15 p	6:25 p	6:35 p	6:42 p
5:45 p	5:50 p	5:59 p	6:12 p	6:22 p	-	6:32 p	6:45 p	6:55 p	7:05 p	7:12 p
6:45 p	6:50 p	6:59 p	7:12 p	7:22 p	-	7:32 p	7:45 p	7:55 p	8:05 p	8:12 p
8:15 p	8:20 p	8:29 p	8:42 p	8:52 p	-	9:02 p	9:15 p	9:25 p	9:35 p	9:42 p
9:45 p	9:50 p	9:59 p	10:12 p	10:22 p	-	10:32 p	10:45 p	10:55 p	11:05 p	11:12 p

Shading shows the use of three different buses on this route.

7.6 Operate a modified Hampden Route all day

There are a number of changes that could be made to enhance the usefulness of Hampden bus service:

7.6.1 Add northbound stops at Graves Supermarket

The new supermarket is currently located on a one-way route segment. This fails to provide many Hampden residents with convenient roundtrip access to this shopping destination. The current arrangement requires anyone who lives south or west of the Main Road/Western Avenue intersection to travel through downtown Bangor if they want to ride the bus to the supermarket. One solution is to divert northbound buses to Graves Supermarket after they depart the Rite Aid bus stop.

7.6.2 Serve the driveway of Roe Village

Senior citizens are unlikely to walk to the main roadway to wait for the bus. There should be time to turn into the driveway of Hampden's senior citizen apartment complex.

7.6.3 Discontinue the Main Road segment south of Kennebec Road

Ridership on this road segment is minimal. Shortening the route will result in faster bus rides for some Hampden bus passengers.

7.6.4 Straighten the route by discontinuing service on Old County Road

This will result in faster and more direct service for Hampden bus riders.

7.6.5 Add Shaws in Bangor as a scheduled stop in both directions

This change will benefit many bus passengers from Hampden and Bangor. If the frequency of bus service to the University of Maine is increased, Old Town buses will no longer be available to serve this location.

7.6.6 Operate the Hampden route all day

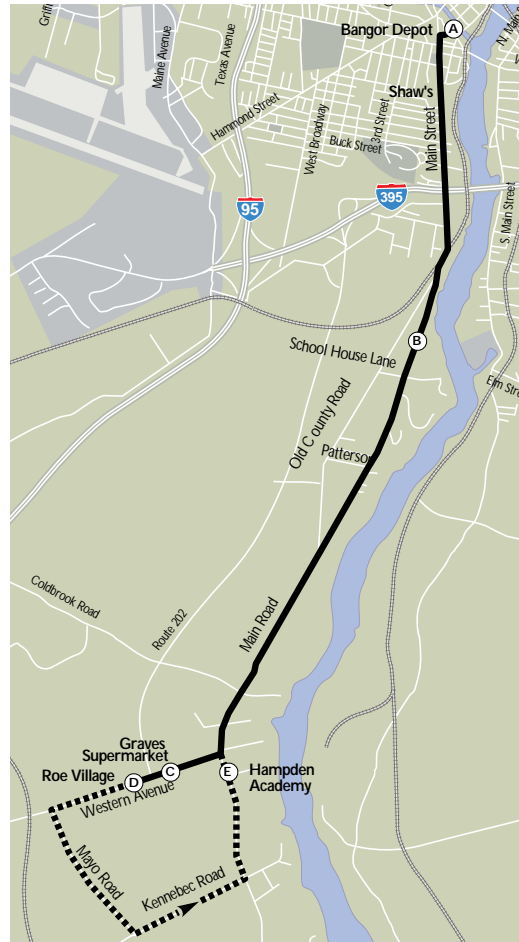
The current midday gap makes it difficult for Hampden residents to schedule midday trips.

7.6.7 Operate one more evening trip

Several participants in public meetings identified a need for one more evening trip on the Hampden route.

All of these changes are reflected in a timetable presented in Figure 7.11. Hampden buses currently provide 8 hours of bus service per day. The proposed timetable calls for Hampden bus service to increase to 13 hours per day, an increase of 5 hours or 63%. This will add approximately 1,250 service hours per year.

Figure 7.13 Revised Hampden Service



Bangor Depot	Hampden Shaws	Hampden Trailer Park	Graves Supermarket	Roe Village	Rite Aid	Graves Supermarket	Roe Village	Hampden Trailer Park	Hampden Shaws	Bangor Depot
6:15 a	6:20 a	6:25 a	6:35 a	6:37 a	6:45 a	6:48 a	6:50 a	7:00 a	7:05 a	7:10 a
7:15 a	7:20 a	7:25 a	7:35 a	7:37 a	7:45 a	7:48 a	7:50 a	8:00 a	8:05 a	8:10 a
8:15 a	8:20 a	8:25 a	8:35 a	8:37 a	8:45 a	8:48 a	8:50 a	9:00 a	9:05 a	9:10 a
9:15 a	9:20 a	9:25 a	9:35 a	9:37 a	9:45 a	9:48 a	9:50 a	10:00 a	10:05 a	10:10 a
10:15 a	10:20 a	10:25 a	10:35 a	10:37 a	10:45 a	10:48 a	10:50 a	11:00 a	11:05 a	11:10 a
11:15 a	11:20 a	11:25 a	11:35 a	11:37 a	11:45 a	11:48 a	11:50 a	12:00 p	12:05 p	12:10 p
12:15 p	12:20 p	12:25 p	12:35 p	12:37 p	12:45 p	12:48 p	12:50 p	1:00 p	1:05 p	1:10 p
1:15 p	1:20 p	1:25 p	1:35 p	1:37 p	1:45 p	1:48 p	1:50 p	2:00 p	2:05 p	2:10 p
2:15 p	2:20 p	2:25 p	2:35 p	2:37 p	2:45 p	2:48 p	2:50 p	3:00 p	3:05 p	3:10 p
3:15 p	3:20 p	3:25 p	3:35 p	3:37 p	3:45 p	3:48 p	3:50 p	4:00 p	4:05 p	4:10 p
4:15 p	4:20 p	4:25 p	4:35 p	4:37 p	4:45 p	4:48 p	4:50 p	5:00 p	5:05 p	5:10 p
5:15 p	5:20 p	5:25 p	5:35 p	5:37 p	5:45 p	5:48 p	5:50 p	6:00 p	6:05 p	6:10 p
6:15 p	6:20 p	6:25 p	6:35 p	6:37 p	6:45 p	-	-	6:53 p	-	7:03 p

UNIVERSITY OF MAINE TRANSIT SERVICES

7.7 Campus / park & ride shuttle

The University of Maine has identified a need for a peripheral parking lot to accommodate faculty, staff, and off-campus students who commute to the Orono campus in private automobiles. A separate BACTS-sponsored University of Maine Transportation Study has focused on a potential parking lot site located west of the main campus just east of the University Park housing development.

Fast, frequent, and convenient shuttle bus service will be needed to link a peripheral parking lot with the center of the Orono campus. A convenient shuttle link will help ensure that the new parking area is accepted and utilized by a large segment of commuting students and staff.

A park and ride shuttle service could be designed to address a number of related concerns that have been raised within the University community. These include:

- The goal of transforming the Orono campus into a more pedestrian friendly environment, with less emphasis on roadways and parking for motor vehicles
- Possible construction of new buildings in the center of the campus on land that is currently used for parking
- Improved safety in the evening for students who walk between campus facilities and their dormitories
- Improved safety in the evening for students who walk between campus facilities and their parked cars
- Improved daytime convenience for students who walk long distances to and from dormitories
- Improved options to reduce parking violations by commuters and by students who live on-campus

The key strategies for developing a successful campus shuttle service are likely to be:

1. Offer frequent service, with a wait of no more than 10 minutes between buses. Five-minute headways are preferable.
2. Keep the route short to allow quick turn around of buses. This will minimize the need for extra buses and drivers.
3. Offer fast and direct rides between the parking area and the campus center, minimizing the time that people are required to spend on a bus.
4. Ensure that the peripheral parking lot is well lit and that stops are designed so people are not required to walk long distances across the parking area.
5. Develop on-campus bus stops that are clearly identified and conveniently located, with protected waiting areas for key locations.

6. Design a route that coincides with existing cross campus travel patterns.
7. Provide front door service to as many outlying dormitory facilities as possible.
8. Include bus stops adjacent to key center-campus destinations. Candidates include the Memorial Union, the library, classroom and research facilities, and gymnasiums.

The University of Maine Transportation Study has identified a possible roadway configuration to link a proposed parking lot near University Park with Rangely Road near the Hilltop dormitory complex. A proposed shuttle route would utilize this new roadway to travel between the new parking area and Hilltop. Buses would then proceed via Long Road and Flagstaff Road to the circle at the Memorial Union.

From the Memorial Union, the bus would travel via Sebago Road and Grove Street Extension to the east end of the University campus. It would utilize Square Road, passing York Hall, Kennebec Hall, and Aroostook Hall. The bus would then travel through a new parking lot proposed for the current York Village site before returning to the Memorial Union via Grove Street Extension and Sebago Road.

The return shuttle would follow the same return route from the Memorial Union to Hilltop and the new parking area by University Park. A map for this proposed route is presented in Figure 7.14.

A complete roundtrip on this proposed route is likely to take between 20 and 25 minutes, depending on the configuration of the new roadway and parking area. With two buses, it should be possible to offer consistent and reliable service every 15 minutes on this route. It may be possible to operate as frequently as every 10 minutes, but with a somewhat lower level of reliability. One bus could be used during evening hours to reduce the cost of the service. A draft timetable with 10-minute headways during the daytime and 20-minute headways at night is included in Figure 7.14.

An alternate approach would be to develop a new bus transfer facility on Moosehead Road next to Fogler Library. This would require reopening Moosehead Road for buses only. Buses would travel from Hilltop to the Library via Long Road and Munson Road. This route is closer to dormitories on the southern end of the campus. This route would also offer front-door service to the Memorial Gym. This configuration is likely to take roughly 2-3 minutes longer than the Flagstaff Road/Memorial Union route.

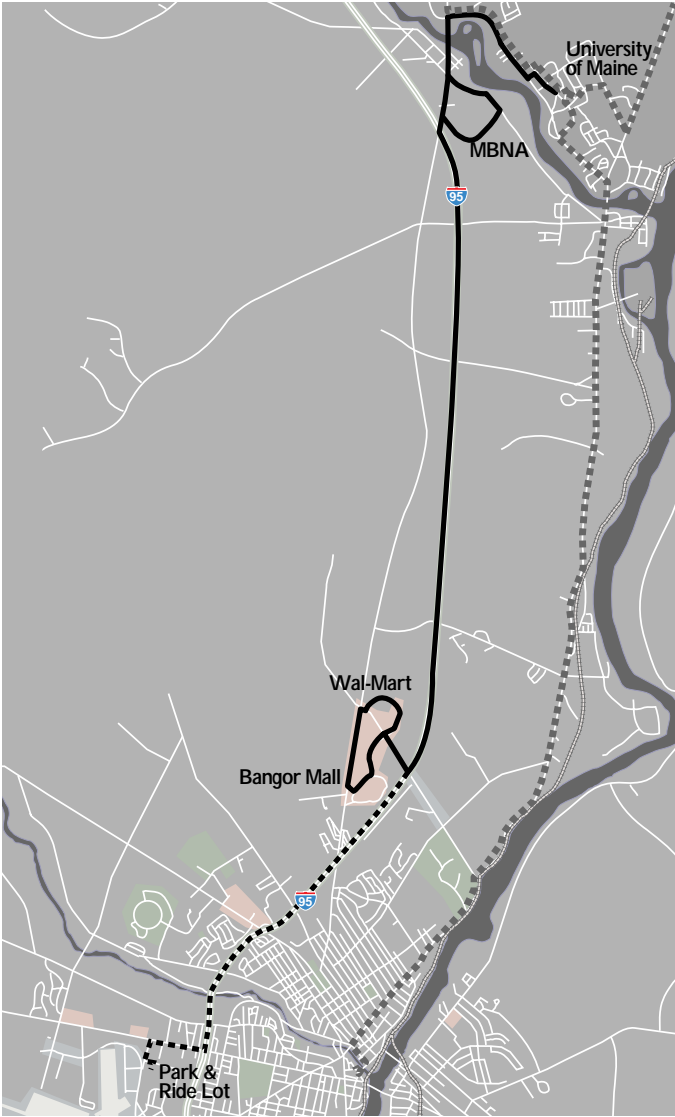
In evaluating these alternatives, it is important to note that the two routes involve different transit hub locations for the center of the University campus. One uses the Memorial Union circle, while the other envisions a new transit hub on Moosehead Road next to the Library.

Figure 7.14 Proposed University of Maine Campus Shuttle



Parking Lot	Hilltop	Memorial Union	York Village	Memorial Union	Hilltop	Parking Lot
7:00 a	7:03 a	7:06 a	7:09 a	7:12 a	7:15 a	7:18 a
7:10 a	7:13 a	7:16 a	7:19 a	7:22 a	7:25 a	7:28 a
7:20 a	7:23 a	7:26 a	7:29 a	7:32 a	7:35 a	7:38 a
7:30 a	7:33 a	7:36 a	7:39 a	7:42 a	7:45 a	7:48 a
7:40 a	7:43 a	7:46 a	7:49 a	7:52 a	7:55 a	7:58 a
7:50 a	7:53 a	7:56 a	7:59 a	8:02 a	8:05 a	8:08 a
8:00 a	8:03 a	8:06 a	8:09 a	8:12 a	8:15 a	8:18 a
8:10 a	8:13 a	8:16 a	8:19 a	8:22 a	8:25 a	8:28 a
SERVICE CONTINUES EVERY 10 MINUTES						
5:00 p	5:03 p	5:06 p	5:09 p	5:12 p	5:15 p	5:18 p
5:10 a	5:13 a	5:16 a	5:19 a	5:22 a	5:25 a	5:28 a
5:20 p	5:23 p	5:26 p	5:29 p	5:32 p	5:35 p	5:38 p
5:30 a	5:33 a	5:36 a	5:39 a	5:42 a	5:45 a	5:48 a
5:50 a	5:53 a	5:56 a	5:59 a	6:02 a	6:05 a	6:08 a
6:10 a	6:13 a	6:16 a	6:19 a	6:22 a	6:25 a	6:28 a
6:30 a	6:33 a	6:36 a	6:39 a	6:42 a	6:45 a	6:48 a
6:50 a	6:53 a	6:56 a	6:59 a	7:02 a	7:05 a	7:08 a
SERVICE COINTNUES EVERY 20 MINUTES						
10:00 p	10:03 p	10:06 p	10:09 p	10:12 p	10:15 p	10:18 p
10:20 p	10:23 p	10:26 p	10:29 p	10:32 p	10:35 p	10:38 p
10:40 p	10:43 p	10:46 p	10:49 p	10:52 p	10:55 p	10:58 p
11:00 p	11:03 p	11:06 p	11:09 p	11:12 p	11:15 p	11:18 p

Figure 7.15 Possible I-95 / Research Park Bus Service



Texas Avenue	Bangor Mall	MBNA	Univ of Maine	Univ of Maine	MBNA	Bangor Mall	Texas Avenue
6:50 a	-	7:05 a	7:15 a	7:20 a	7:30 a	-	7:45 a
7:50 a	-	8:05 a	8:15 a	8:20 a	8:30 a	-	8:45 a
8:50 a	-	9:05 a	9:15 a	9:20 a	9:30 a	9:40 a	-
-	9:45 a	10:00 a	10:10 a	10:15 a	10:25 a	10:40 a	-
-	10:45 a	11:00 a	11:10 a	11:15 a	11:25 a	11:40 a	-
-	11:45 a	12:00 p	12:10 p	12:15 p	12:25 p	12:40 p	-
-	12:45 p	1:00 p	1:10 p	1:15 p	1:25 p	1:40 p	-
-	1:45 p	2:00 p	2:10 p	2:15 p	2:25 p	2:40 p	-
-	3:00 p	3:15 p	3:25 p	3:30 p	3:40 p	-	3:55 p
4:00 p	-	4:15 p	4:25 p	4:30 p	4:40 p	-	4:55 p
5:00 p	-	5:15 p	5:25 p	5:30 p	5:40 p	-	5:55 p
6:00 p	-	6:15 p	6:25 p	6:30 p	6:40 p	-	6:55 p

The location that is selected will need to accommodate a variety of different buses. This will include at a minimum a campus shuttle plus the existing Old Town/Bangor buses. A proposed bus link to the Orono Research Park would also need to serve this on-campus location.

The cost of an on-campus shuttle service will depend on the frequency of service, the hours of operation, and possible variations in the availability of service during the calendar year. To benefit employees, the service is likely to be needed throughout the calendar year. It may be possible, however, to save money by reducing service frequency to every 20 minutes during the summer months.

If 10-minute daytime service is provided on weekdays throughout the year, with 20-minute service in the evenings, this will involve an estimated 6,692 annual service hours. At \$30 per hour, this level of service would cost roughly \$200,000 per year. If service is cut back to every 20 minutes on 90 summer days, this will result in an estimated 5,737 annual hours. At \$30 per hour, this service would cost roughly \$172,000 per year.

If demand from commuting staff and students is high, it may be necessary to add a third bus during peak hours. This would add additional costs. With three buses in service, headways would be approximately 6 or 7 minutes.

7.8 Interstate-95 / Research Park bus route

There are five different issues that point toward the possible need for a new bus route linking Bangor and the University of Maine via Interstate 95.

1. University employees who live outside of downtown Bangor currently must travel into the downtown center to commute to Orono by bus. A bus via Interstate 95 would offer a faster and more direct alternative. A park and ride lot for commuters who use this I-95 bus service could perhaps be developed adjacent to Maine Avenue.
2. There is currently no bus service to the Orono Research Park located near Exit 51. A bus that links Bangor and Orono via I-95 could be routed through the Research Park to benefit commuters who work at businesses located within the Research Park.
3. If an I-95 route served Stillwater Avenue near Exit 51, this would eliminate the need to divert the Old Town bus to the University Mall. This will result in faster, more direct rides for people traveling between Old Town and Orono and more reliable on-time performance for the entire Old Town route.
4. A bus route on I-95 would provide University of Maine students with direct access to the Bangor Mall. This would eliminate the need to travel all the way to downtown Bangor and transfer to the Mount Hope route.

5. The University's "Maine Bus" currently provides a direct link to the Bangor Mall via I-95 on Friday and Saturday evenings. A regularly scheduled transit service on this route could supplement or replace this special University service.

A map and draft timetable for a proposed I-95 bus route are presented in Figure 7.15. This draft schedule calls for using one bus to provide hourly service. The bus would serve a Maine Avenue park and ride lot during commute hours, and the Bangor Mall during the middle hours of the day. Bangor Mall service could be extended into the evening on Friday and Saturday nights to take the place of the University's "Maine Bus" service.

The draft timetable presented in Figure 7.15 calls for approximately 12 hours of service per weekday, or roughly 3,000 service hours per year.

7.9 Park Street/Talmar Woods shuttle

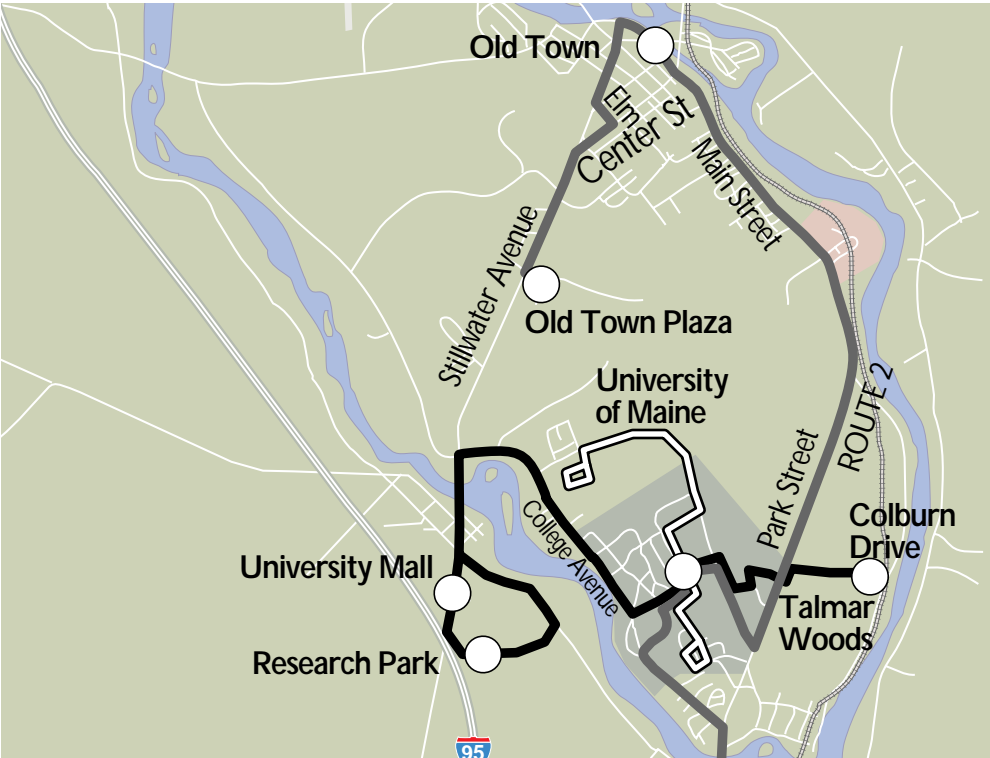
A residential housing project proposed for Colburn Drive in Orono is expected to accommodate up to 500 University students and staff. Project developers have identified a need for a shuttle bus service to link this location east of Park Street with the University of Maine campus.

A possible shuttle route would begin at the Colburn Drive development and proceed across Route 2 and through the Talmar Woods residential neighborhood. From Talmar Woods, the bus would proceed via Rangeley Road and Belgrade Spur to the circle at the University of Maine Memorial Union.

This shuttle route could be extended to include service to the University Mall and the Orono Research Park. Assuming that one bus is used, this would result in service every 30 minutes on this route. A route map and timetable are presented in Figure 7.16. This map also shows the proposed on-campus shuttle and a revised Old Town bus route.

The owner of the Colburn Drive development may need to pay an annual contract fee to help cover the cost of operating this proposed shuttle route. The cost of the service will depend on how many hours per day and how many days per year the shuttle operates. The timetable in Figure 7.16 involves roughly 11 service hours per weekday, or 2,750 hours per year.

Figure 7.16 Research Park / Colburn Road Shuttle



MBNA	UM Union	Talmar Woods	Colburn Drive	Talmar Woods	UM Union	MBNA
					6:50 a	7:00 a
7:00 a	7:10 a	7:13 a	7:15 a	7:18 a	7:20 a	7:30 a
7:30 a	7:40 a	7:43 a	7:45 a	7:48 a	7:50 a	8:00 a
8:00 a	8:10 a	8:13 a	8:15 a	8:18 a	8:20 a	8:30 a
8:30 a	8:40 a	8:43 a	8:45 a	8:48 a	8:50 a	9:00 a
9:00 a	9:10 a	9:13 a	9:15 a	9:18 a	9:20 a	9:30 a
9:30 a	9:40 a	9:43 a	9:45 a	9:48 a	9:50 a	10:00 a
10:00 a	10:10 a	10:13 a	10:15 a	10:18 a	10:20 a	10:30 a
10:30 a	10:40 a	10:43 a	10:45 a	10:48 a	10:50 a	11:00 a
11:00 a	11:10 a	11:13 a	11:15 a	11:18 a	11:20 a	11:30 a
11:30 a	11:40 a	11:43 a	11:45 a	11:48 a	11:50 a	12:00 p
12:00 p	12:10 p	12:13 p	12:15 p	12:18 p	12:20 p	12:30 p
12:30 p	12:40 p	12:43 p	12:45 p	12:48 p	12:50 p	1:00 p
1:00 p	1:10 p	1:13 p	1:15 p	1:18 p	1:20 p	1:30 p
1:30 p	1:40 p	1:43 p	1:45 p	1:48 p	1:50 p	2:00 p
2:00 p	2:10 p	2:13 p	2:15 p	2:18 p	2:20 p	2:30 p
2:30 p	2:40 p	2:43 p	2:45 p	2:48 p	2:50 p	3:00 p
3:00 p	3:10 p	3:13 p	3:15 p	3:18 p	3:20 p	3:30 p
3:30 p	3:40 p	3:43 p	3:45 p	3:48 p	3:50 p	4:00 p
4:00 p	4:10 p	4:13 p	4:15 p	4:18 p	4:20 p	4:30 p
4:30 p	4:40 p	4:43 p	4:45 p	4:48 p	4:50 p	5:00 p
5:00 p	5:10 p	5:13 p	5:15 p	5:18 p	5:20 p	5:30 p
5:30 p	5:40 p	5:43 p	5:45 p			

EASTERN MAINE MEDICAL CENTER SHUTTLES

The Eastern Maine Medical Center has expanded significantly in the past decade. As more buildings have been developed, the amount of land available for surface parking has diminished. The Medical Center recently constructed a multi-level parking garage to ensure that patients and visitors have convenient parking opportunities. However, the supply of employee parking spaces continues to be severely limited.

In the summer of 2002, Eastern Maine Healthcare began construction of a new Webber medical facility at the State Street site. This construction project displaced approximately 150 existing employee parking spaces. To accommodate displaced employees, the Medical Center has leased parking spaces in Bangor's downtown parking garage. EMMC operates a peak-hour shuttle bus service between the downtown garage and the Medical Center's MRI entrance on State Street.

Prior to the summer of 2002, EMMC provided frequent shuttle bus service between the MRI entrance and the Wing Parking lot located on the opposite side of State Street. The Wing Lot shuttle was discontinued to allow drivers and vehicles to be shifted to the downtown parking garage shuttle.

Once the new Webber facility is completed, parking demand at EMMC is expected to increase for both employees and patients. Eastern Maine Healthcare is currently considering construction of an off-site parking lot adjacent to the Sylvan Road near Interstate 95. This site is located 2.9 miles from the Medical Center.

7.10 EMMC downtown shuttle

EMMC currently operates an employee shuttle bus service between the Medical Center's State Street MRI entrance and Bangor's downtown parking garage. The service operates from 6:00 a.m. to 10:00 a.m. and from 2:30 p.m. to 5:30 p.m. One bus is used to provide service on this route approximately every 15 minutes. Traffic delays on State Street sometimes increase headways on the route to roughly 20 minutes.

This shuttle service was implemented in the summer of 2002 as a temporary measure to meet parking requirements for employees during construction of a new Webber III medical building. It is unknown just how many employees will be interested in continuing to park in the downtown garage following completion of the new Webber facility. But the shortage of parking at Medical Center is likely to continue once construction is completed, and it may worsen when new employees are added to staff the new building.

Some employees may prefer to continue parking downtown. And some new staff members may prefer the downtown garage to the proposed off-site Sylvan Road parking lot. Other employees who live within the Bangor urban area may be willing to leave their cars at home

and travel to and from work via the public bus system. A greater number of patients and visitors from the Bangor area might also be willing to travel to EMMC without their cars if a convenient and quality bus alternative is available.

There are two key ingredients for improving car-free access between downtown Bangor and EMMC: (1) Operation of fast and frequent shuttle service; and (2) construction of a driveway and passenger loading area to accommodate small or medium-sized buses near the main Medical Center entrance.

The hospital's temporary downtown shuttle picks up and drops off passengers at the State Street MRI entrance. Although the Hancock Street entrance is closer to downtown, there are no driveways or loading areas available for buses at the Hancock Street entrance. A bus ride from downtown typically passes the Hancock Street entrance in less than 5 minutes. Employees often are required to remain onboard for as much as another 5 minutes as their bus waits at streetlights and travels through congested traffic to reach the State Street entrance. In the afternoon, buses exiting the Medical Center onto State Street are often delayed for several minutes waiting for an opening in both lanes of State Street traffic.

Accommodating buses at a Hancock Street entrance will result in shorter bus rides and faster, more frequent, and more reliable shuttle service.

A new regularly scheduled public bus route could replace the employee shuttle currently operated by EMMC. A small bus could be used on this route to help ensure that the Hancock Street entrance can be used. The bus would follow the route of the existing EMMC shuttle from downtown to the Hancock Street entrance. As already indicated, a bus stop and turn-around driveway will be needed near the main hospital entrance.

Use of the Hancock Street entrance will allow reliable 15-minute service to be offered with one bus. The service could operate Monday through Friday from 6:15 a.m. until 6:15 p.m., resulting in 12 hours of weekday service. This translates into a projected total of 3,000 service hours per year. Costs could be shared with Eastern Maine Healthcare, with the hospital paying for commuter hours and other transit funding sources covering the cost of continued midday service.

7.11 Sylvan Road parking lot shuttle

Shuttle buses between EMMC and the proposed Sylvan Road parking area could be operated for the Medical Center by Bangor's public transit system. This approach is followed in New Hampshire, where Advance Transit, the region's public transit provider, operates parking lot shuttles for Dartmouth Hitchcock Medical Center.

A shuttle link between EMMC and the Sylvan Road could be provided every 20 minutes with one bus, or every 10 minutes with two buses. Perhaps the best strategy would be to use two buses during peak commute times, while relying on one bus to provide less frequent service during the middle and end of the day. It may be possible for this route to include a stop at Eastern Maine Technical College.

A possible timetable for this service is presented in Figure 7.17. The draft timetable includes 10-minute service from 5:50 a.m. to 9:10 a.m. and from 2:40 p.m. to 5:20 p.m. During midday hours and between 5:20 p.m. and 6:40 p.m. one bus could serve the route every 30 minutes. This level of service will involve 18.5 service hours per day, or roughly 4,625 service hours per year.

Use of one bus to offer 20-minute service throughout the day would involve 12.8 hours per day, or 3,200 hours per year.

7.12 Wing lot park and ride shuttle

It should also be possible for the city of Bangor to operate a restored Wing lot shuttle as part of the region's public transit system. The bus could serve the State Street MRI entrance, or it could operate to a new proposed bus loading area near the main hospital entrance.

With one bus, service on the route could be offered roughly every 10 minutes. If the shuttle operates from 6:00 a.m. to 9:00 a.m. and from 2:30 p.m. to 5:30 p.m., this will result in 6 service hours per day, or roughly 1,500 service hours per year.

Figure 7.17 Sylvan Road Parking Lot Shuttle

EMMC	Sylvan Road	Technical College	EMMC
	5:50 a	5:51 a	5:57 a
	6:00 a	6:01 a	6:07 a
6:00 a	6:10 a	6:11 a	6:17 a
6:10 a	6:20 a	6:21 a	6:27 a
6:20 a	6:30 a	6:31 a	6:37 a
6:30 a	6:40 a	6:41 a	6:47 a
6:40 a	6:50 a	6:51 a	6:57 a
6:50 a	7:00 a	7:01 a	7:07 a
7:00 a	7:10 a	7:11 a	7:17 a
7:10 a	7:20 a	7:21 a	7:27 a
7:20 a	7:30 a	7:31 a	7:37 a
7:30 a	7:40 a	7:41 a	7:47 a
7:40 a	7:50 a	7:51 a	7:57 a
7:50 a	8:00 a	8:01 a	8:07 a
8:00 a	8:10 a	8:11 a	8:17 a
8:10 a	8:20 a	8:21 a	8:27 a
8:20 a	8:30 a	8:31 a	8:37 a
8:30 a	8:40 a	8:41 a	8:47 a
8:40 a	8:50 a	8:51 a	8:57 a
8:50 a	9:00 a	9:01 a	9:07 a
9:00 a	9:15 a	9:16 a	9:22 a
9:30 a	9:45 a	9:46 a	9:52 a
10:00 a	10:15 a	10:16 a	10:22 a
10:30 a	10:45 a	10:46 a	10:52 a
11:00 a	11:15 a	11:16 a	11:22 a
11:30 a	11:45 a	11:46 a	11:52 a
12:00 p	12:15 p	12:16 p	12:22 p
12:30 p	12:45 p	12:46 p	12:52 p
1:00 p	1:15 p	1:16 p	1:22 p
1:30 p	1:45 p	1:46 p	1:52 p
2:00 p	2:10 p	2:11 p	2:17 p
2:20 p	2:30 p	2:31 p	2:37 p
2:40 p	2:50 p	2:51 p	2:57 p
2:50 p	3:00 p	3:01 p	3:07 p
3:00 p	3:10 p	3:11 p	3:17 p
3:10 p	3:20 p	3:21 p	3:27 p
3:20 p	3:30 p	3:31 p	3:37 p
3:30 p	3:40 p	3:41 p	3:47 p
3:40 p	3:50 p	3:51 p	3:57 p
3:50 p	4:00 p	4:01 p	4:07 p
4:00 p	4:10 p	4:11 p	4:17 p
4:10 p	4:20 p	4:21 p	4:27 p
4:20 p	4:30 p	4:31 p	4:37 p
4:30 p	4:40 p	4:41 p	4:47 p
4:40 p	4:50 p	4:51 p	4:57 p
4:50 p	5:00 p	5:01 p	5:07 p
5:00 p	5:10 p	5:11 p	5:17 p
5:10 p	5:20 p	5:21 p	5:27 p
5:20 p	5:30 p	5:31 p	5:37 p
5:40 p	5:50 p	5:51 p	5:57 p
6:00 p	6:10 p	6:11 p	6:17 p
6:20 p	6:30 p	6:31 p	6:37 p

Shaded areas show use of second bus.

INTERMODAL TRANSPORTATION LINKS

There are a number of recent plans and studies that envision increased business and tourist travel for Bangor. This includes both the Maine Strategic Passenger Transportation Plan and the Penobscot Riverfront Development Program. The latter calls for construction of a major hotel and conference center on riverfront land owned by the city of Bangor. Efforts are also underway to enhance air travel to the Bangor International Airport and to reintroduce rail passenger service. The Maine Strategic Passenger Transportation Plan envisions the development of intermodal hubs in Bangor, with transportation links to neighboring Maine tourist destinations.

Sections 7.13 and 7.14 examine services that may be needed to accommodate increased business and tourist travel in the Bangor region. This includes a circulator shuttle for downtown Bangor, and a bus route connecting downtown Bangor with area hotels and transportation terminals.

7.13 Bangor downtown shuttle

If new hotels and a conference center are developed near the Bangor riverfront, a downtown shuttle could allow visitors to reach these new facilities and Bangor's central downtown area without a car. A downtown shuttle could also expand and enhance pedestrian access for area residents who work, shop, and visit cultural attractions in downtown Bangor.

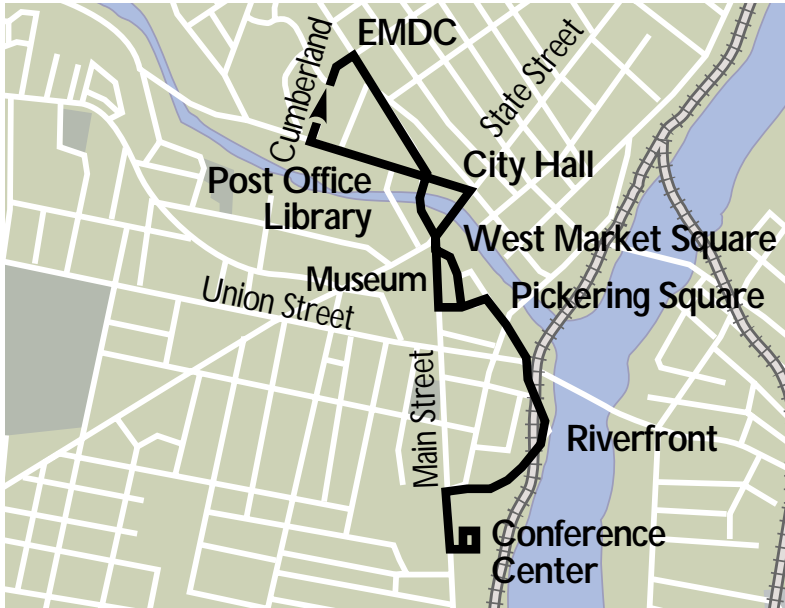
A downtown shuttle should connect the new waterfront hotel with Pickering Square, West Market Square, and Bangor City Hall. This route could be extended to serve the Bangor Public Library, the Post Office and Federal Building, and the EMDC office building on Cumberland Place.

A map and timetable for a proposed downtown shuttle route are presented in Figure 7.18. The timetable assumes that two buses would be used on the route to provide service every 10 minutes. The shuttle is envisioned as a free service designed to benefit the greatest possible number of visitors and residents.

It would be possible to limit the service during the fall, winter, or spring to just one bus. This would result in bus service every 20 minutes during part of the year. If one bus provides daily service throughout the year, and if a second bus is added from late June through Labor Day, this would result in approximately 6,286 service hours per year.

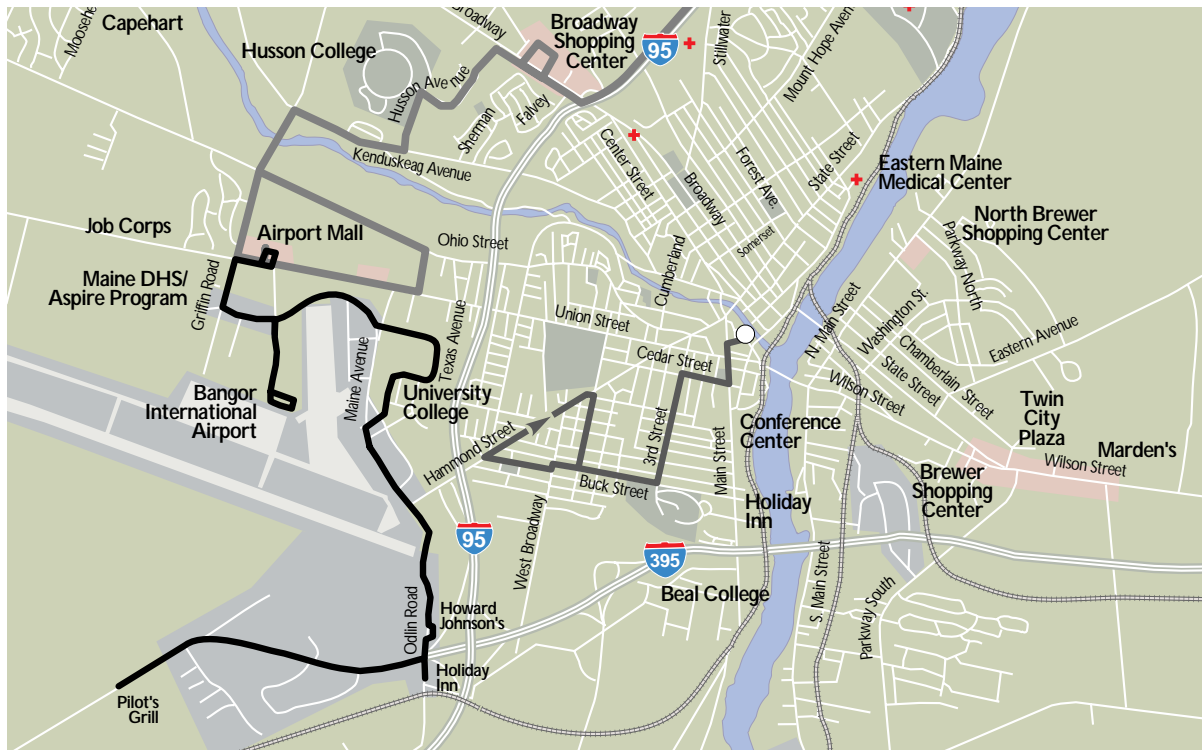
It may be desirable to maintain 10-minute headways during the middle of the day on weekdays during the fall, winter, and spring. This could add roughly another 800 service hours per year.

Figure 7.18 Downtown Bangor Shuttle



Hotel	River-front	Pickering Square	Market Square	Library	Market Square	Pickering Square	River-front	Hotel
7:00 a	7:02 a	7:04 a	7:05 a	7:08 a	7:13 a	7:14 a	7:16 a	7:18 a
7:20 a	7:22 a	7:24 a	7:25 a	7:28 a	7:33 a	7:34 a	7:36 a	7:38 a
7:40 a	7:42 a	7:44 a	7:45 a	7:48 a	7:53 a	7:54 a	7:56 a	7:58 a
8:00 a	8:02 a	8:04 a	8:05 a	8:08 a	8:13 a	8:14 a	8:16 a	8:18 a
8:20 a	8:22 a	8:24 a	8:25 a	8:28 a	8:33 a	8:34 a	8:36 a	8:38 a
8:40 a	8:42 a	8:44 a	8:45 a	8:48 a	8:53 a	8:54 a	8:56 a	8:58 a
9:00 a	9:02 a	9:04 a	9:05 a	9:08 a	9:13 a	9:14 a	9:16 a	9:18 a
9:20 a	9:22 a	9:24 a	9:25 a	9:28 a	9:33 a	9:34 a	9:36 a	9:38 a
9:40 a	9:42 a	9:44 a	9:45 a	9:48 a	9:53 a	9:54 a	9:56 a	9:58 a
10:00 a	10:02 a	10:04 a	10:05 a	10:08 a	10:13 a	10:14 a	10:16 a	10:18 a
10:10 a	10:12 a	10:14 a	10:15 a	10:18 a	10:23 a	10:24 a	10:26 a	10:28 a
10:20 a	10:22 a	10:24 a	10:25 a	10:28 a	10:33 a	10:34 a	10:36 a	10:38 a
10:30 a	10:32 a	10:34 a	10:35 a	10:38 a	10:43 a	10:44 a	10:46 a	10:48 a
10:40 a	10:42 a	10:44 a	10:45 a	10:48 a	10:53 a	10:54 a	10:56 a	10:58 a
10:50 a	10:52 a	10:54 a	10:55 a	10:58 a	11:03 a	11:04 a	11:06 a	11:08 a
11:00 a	11:02 a	11:04 a	11:05 a	11:08 a	11:13 a	11:14 a	11:16 a	11:18 a
11:10 a	11:12 a	11:14 a	11:15 a	11:18 a	11:23 a	11:24 a	11:26 a	11:28 a
11:20 a	11:22 a	11:24 a	11:25 a	11:28 a	11:33 a	11:34 a	11:36 a	11:38 a
SERVICE CONTINUES EVERY 10 MINUTES								
8:30 p	8:32 p	8:34 p	8:35 p	8:38 p	8:43 p	8:44 p	8:46 p	8:48 p
8:40 p	8:42 p	8:44 p	8:45 p	8:48 p	8:53 p	8:54 p	8:56 p	8:58 p
8:50 p	8:52 p	8:54 p	8:55 p	8:58 p	9:03 p	9:04 p	9:06 p	9:08 p
9:00 p	9:02 p	9:04 p	9:05 p	9:08 p	9:13 p	9:14 p	9:16 p	9:18 p
9:10 p	9:12 p	9:14 p	9:15 p	9:18 p	9:23 p	9:24 p	9:26 p	9:28 p
9:20 p	9:22 p	9:24 p	9:25 p	9:28 p	9:33 p	9:34 p	9:36 p	9:38 p
9:30 p	9:32 p	9:34 p	9:35 p	9:38 p	9:43 p	9:44 p	9:46 p	9:48 p
9:40 p	9:42 p	9:44 p	9:45 p	9:48 p	9:53 p	9:54 p	9:56 p	9:58 p
9:50 p	9:52 p	9:54 p	9:55 p	9:58 p	10:03 p	10:04 p	10:06 p	10:08 p
10:00 p	10:02 p	10:04 p	10:05 p	10:08 p	10:13 p	10:14 p	10:16 p	10:18 p

Figure 7.19 Airport / Hotel / Outer Hammond Street Route



Airport Mall	DHS	Airport	University College	Howard Johnson's	Pilot's Grill	Holiday Inn	Howard Johnson's	University College	Airport	DHS	Airport Mall
6:30 a	6:33 a	6:37 a	6:42 a	6:47 a	6:52 a	6:57 a	7:00 a	7:05 a	7:10 a	7:13 a	7:16 a
7:30 a	7:33 a	7:37 a	7:42 a	7:47 a	7:52 a	7:57 a	8:00 a	8:05 a	8:10 a	8:13 a	8:16 a
8:30 a	8:33 a	8:37 a	8:42 a	8:47 a	8:52 a	8:57 a	9:00 a	9:05 a	9:10 a	9:13 a	9:16 a
9:30 a	9:33 a	9:37 a	9:42 a	9:47 a	9:52 a	9:57 a	10:00 a	10:05 a	10:10 a	10:13 a	10:16 a
10:30 a	10:33 a	10:37 a	10:42 a	10:47 a	10:52 a	10:57 a	11:00 a	11:05 a	11:10 a	11:13 a	11:16 a
11:30 a	11:33 a	11:37 a	11:42 a	11:47 a	11:52 a	11:57 a	12:00 p	12:05 p	12:10 p	12:13 p	12:16 p
12:30 p	12:33 p	12:37 p	12:42 p	12:47 p	12:52 p	12:57 p	1:00 p	1:05 p	1:10 p	1:13 p	1:16 p
1:30 p	1:33 p	1:37 p	1:42 p	1:47 p	1:52 p	1:57 p	2:00 p	2:05 p	2:10 p	2:13 p	2:16 p
2:30 p	2:33 p	2:37 p	2:42 p	2:47 p	2:52 p	2:57 p	3:00 p	3:05 p	3:10 p	3:13 p	3:16 p
3:30 p	3:33 p	3:37 p	3:42 p	3:47 p	3:52 p	3:57 p	4:00 p	4:05 p	4:10 p	4:13 p	4:16 p
4:30 p	4:33 p	4:37 p	4:42 p	4:47 p	4:52 p	4:57 p	5:00 p	5:05 p	5:10 p	5:13 p	5:16 p
5:30 p	5:33 p	5:37 p	5:42 p	5:47 p	5:52 p	5:57 p	6:00 p	6:05 p	6:10 p	6:13 p	6:16 p

7.14 Airport / Hotel / Outer Hammond Street Route

The current configuration of the Capehart route provides only indirect access to the airport from downtown Bangor. And public buses provide no service to hotels located on the Odlin Road or to outer Hammond Street.

A bus route designed to link the airport and area hotels is presented in Figure 7.19. The proposed route would begin at the Airport Mall and serve the Department of Human Services, the Bangor International Airport, University College, Odlin Road Hotels, and outer Hammond Street. This route would provide timed connections at the Airport Mall with Capehart buses and a proposed Mall Connector route.

This route would allow improvements to be made to the Capehart route and to the Hammond Street route. Capehart buses would no longer be required to detour to serve DHS and the airport. Hammond Street buses could provide better two-way service for several residential neighborhoods. A reconfigured Hammond Street route and the proposed Mall Connector route appear in Figure 7.19 along with the proposed Airport / Hotel route.

Driveways at most of the hotels on the Odlin Road are not designed to accommodate buses. The proposed route calls for using a single stop adjacent to the Howard Johnson's motel. Guests of other nearby lodging establishments would be required to walk to the Howard Johnson's bus stop.

The cost to operate this downtown / airport / hotel bus route will depend on (1) service frequency, (2) service hours, and (3) how many days per year the service is provided. The draft timetable included in Figure 7.19 shows hourly service between 6:30 a.m. and 6:15 p.m. This amounts to just under 12 hours of service per day. If the service operates six days a week, this would result in an estimated 3,672 service hours per year.